





## Original Correspondence.

PRACTICAL PAPERS ON COLLIERY OPERATIONS—No. VIII.  
VENTILATION OF MINES.

SIR,—The subject under consideration is one of primary importance in the working of mines, whether coal, iron, or other minerals, but probably its importance would not have been seen or considered in the same light as it is at the present time, excepting by those who have thought deeply upon the subject, had it not been for the heart-rending and truly pitiable scenes that have so frequently presented themselves during the last few years. It is beyond the power of the pen to describe the agony that is occasioned by one of those awful calamities—an explosion, especially when it is of such a magnitude as almost to depopulate a whole village, and cast scores of once happy families into the greatest misery and grief. The frequency with which these deplorable accidents have occurred, and the great pecuniary losses by which they are attended, ought to have had the effect of bringing every proprietor and manager of a colliery to a sense of duty, by causing them to attend in a proper manner to this important part of their business—the ventilation of mines. But the effect hitherto produced has only been of an ephemeral character, if we may judge from the facts presented to us by the number of convictions of colliery proprietors during the last few years for neglecting to supply the workmen with an adequate amount of pure air; and, probably, these do not constitute a tithe of the number of those who have been guilty of violating the necessary and wise enactment of making it unlawful to neglect the sanitary state of the mine. Whether the importance of this subject be estimated by the effect produced on the state and community, by shortening the duration of the lives of the hardest and most useful body of men that this country can boast of, or rendering them incapable of labour many years before they would have been but for this cause, and thereby rendering them dependent upon others for support instead of being engaged in building up the greatness of their country, or by the more immediate effect produced by the loss of 363 valuable lives in one year by explosions in coal mines, I think most will agree with me as to the vast importance of the subject of ventilation of mines. If its importance be fairly tested by another standard, it will be found that the proprietors of mines have nothing to lose by having their mines properly ventilated: I refer to that of the men being able to perform much more labour in a mine properly ventilated than in one where the air is vitiated. By a series of experiments conducted at various times and places, and in as fair a manner as experiments can be conducted when the varying circumstances of the state of the man's health, and his greater aptitude for work at one time than at another, are considered, the conclusion arrived at by me is that the same man can perform 6 or 8 per cent. more labour when working with the candle than with the safety-lamp, in what may be considered pure air, and when accustomed to the use of the lamp; but when working in vitiated air he cannot perform the same amount of labour by 14 or 16 per cent., and in some instances much more.

It may be contended that this loss does not necessarily fall upon the proprietor of a colliery, from the system of piece-work prevailing in many localities, and the same price often being paid to a workman for getting a certain seam of coal whether favourable or not to him, but it is only fair to assume that the loss falls upon the proprietors of mines either directly or indirectly, as the workman has nothing to lose but his labour, and he must earn a livelihood. It has been said that the miner becomes habituated to working with the safety-lamp, then he even prefers it to the candle. Well, all that I can say in reply to this is that I have worked during a period of several years with the lamp, and that it was as objectionable to me the last day I worked with it as it was the first. Perhaps the time was not long enough to become accustomed to its use: I have never yet seen a collier, however long he may have been accustomed to the use of the lamp, but was glad to return to the candle when he had an opportunity.

Encouraging and flattering reports have been presented to the public from time to time, to the effect that more scientific principles of ventilation were being gradually introduced into most of our collieries; but we have the fact before us of 363 lives being lost by explosions in coal mines in the year 1860 against 95 for the year 1859, to weigh against these encouraging statements. It is, however, only fair to state that the number of explosions have been precisely the same in both years, and but for the fearful catastrophes of Risca, Hetton, and Burradon collieries the results would not have been very different from the preceding year; but such occurrences as those at Risca and Burradon are clearly those that can and ought to be guarded against, whilst the cause of the Hetton catastrophe, judging from the evidence before the public, is clearly incomprehensible. Those who have read my remarks upon the various systems of getting coal will perceive that I attach great importance to system and order being observed in the getting of coal, and that I attribute many of the explosions to the cause of getting coal regardless of principle. The reader, whether a practical miner or not, will be able to see from what was stated in my last paper that the wonder is not so much that so many explosions should occur, but rather that more do not occur than even at present, when it is considered that the space from which the coal has been wrought is converted into a series of huge gasometers, often containing the subtle and deadly enemy—fire-damp, and that it only requires a fall of the roof, or a fall of atmospheric pressure, to account for the sudden outbursts of gas that we have heard so much of.

It is, perhaps, as well to observe that the same objection does not apply so much to coal being wrought on the deep of the main wagon-road as to upon the rise, as from the lightness of carburetted hydrogen gas it passes off by the law of gravitation to the highest point. It has its objections, but with those I am not at present dealing. My statement of this practice being so widely adopted may be questioned, but I take this opportunity of saying that I challenge anyone to disprove a single statement adduced by me; nay, further, to prove that I have depicted the evil in its worst form, or given colouring to a single statement.

Various have been the theories and suggestions put forth to prevent these calamities occurring, but most have emanated from individuals who have been entirely unacquainted with the difficulties to be encountered in carrying out their theories in the mine; it is not, therefore, to be wondered at that these almost impracticable schemes should have met with so little attention from the proprietors of mines. Probably the proposed method of ventilating collieries by the patent of Mr. Hughes, of Hatton-garden, looks as reasonable upon paper as any that have been brought forward, but my opinion is, that had Mr. Hughes known the nature of colliery operations he would not have gone to the expense of the paper the specification is written upon. I do not much doubt the feasibility of Mr. Hughes's method in sinking shafts or driving tunnels, or in working metallic mines, but whether it will bear comparison with other methods of ventilating, in regard to economy, is a question that remains to be demonstrated. It would hardly be fair to decri an invention in its infancy, without stating some of the reasons for so doing. Well, one of the reasons is that nearly all coal mines are subject to the floor lifting, and in some instances to such an extent that in the course of a single night the floors of the main and other wagon-roads are raised 5 or 6 in.; and this upheaval is by no means a process that takes place with great regularity; what then, I ask, would become of the joints of the pipes, or even of the pipes themselves, if they were raised up a distance of 6 inches in some parts, 4 inches in another, and nothing in others? Still greater objections are to be urged against conducting the pipes at the roof of the mine, or cutting out recesses in the coal for them to rest in. One of the advantages claimed for the invention is that of liberating the air beyond the old workings, and if let out beyond must pass through and keep them safe. By this it is to be presumed that the pipes are left in the workings at the boundary, or the point from which the coal is worked out, to form a gob, or old workings. Now, if so, who can be so credulous as to believe that the air, if liberated at that point, could find its way through many hundreds of yards of old workings, when all the coal has been wrought and the timber drawn? It is often found difficult enough to maintain a passage for the air between each wagon-road past the working face and the old workings, with the coal solid on one side, and timber set for supporting the roof on the other. I do not see that any provision is made against these contingencies in Mr. Hughes's specification. Very many more objections might be raised, entirely independent of those already touched upon, but I do not consider it necessary to say more at present upon these fanciful schemes. I have not made the foregoing remarks upon Mr. Hughes's scheme in consequence of any prejudice I have against his or any other system, but because it appears to have attracted considerable attention from the public, and will, therefore, lead to the idea, so often expressed, that colliery proprietors and managers are indifferent to any proposal that does not emanate from their own body; whereas the reason of such like schemes as Mr. Hughes's being rejected is from their impracticable nature, and not on account of either prejudice or

expense, as some of the proprietors of collieries in this country neither study convenience or expense to render the mine safe and healthy.

The question of how much air is required to properly ventilate a mine depends upon a variety of circumstances. If it be a coal mine, and one that gives off a considerable quantity of carburetted hydrogen gas, it will necessarily require more air to carry off the gas, in order to render the mine anything like safe and healthy, than if no such gas were generated, or only in small quantities. Some of our modern scientific writers attach much importance to the detection of fire-damp in the atmosphere of the mine, and have suggested means of making the lamp a far more delicate test than at present, but for any practical purpose I do not set the slightest necessity for it, as its presence can always be detected before it becomes dangerous by the ordinary safety-lamp; the evil consists in not removing it by a sufficient current of air when its presence has been detected, and using the so-called safety-lamp as a substitute for ventilation. This is not the only gas that is generated in mines, nor the only impurity that requires carrying off by a current of air, but as its effects are so appalling, it demands the greatest attention.

Dr. Wm. Gregory and others, in speaking of fire-damp, remark that if the air is less than six times, or more than fourteen times, the volume of the gas, explosion does not take place. On equal authority we have it stated that the explosion attains its maximum degree of violence when the fire-damp forms one-eighth or one-ninth of the entire volume of mixture. Such statements are calculated to cause erroneous impressions in the minds of many upon this important subject, by leading them to suppose that in places where the greatest amount of gas is given off danger is less to be apprehended. I, therefore, deem it necessary to give the reader a few facts, and allow him to form his own opinion as to whether the laboratory of the chemist adduces the same results as the great laboratory of Nature.

1. In no single instance have I seen or heard of carburetted hydrogen accumulating in works below the wagon-road or air-course, where the angle of inclination is 10° and upwards.—2. In every instance that the presence of fire-damp is detected in the mine it explodes in the lamp with greater violence at the roof of the mine than at the floor; and on many occasions, especially on frosty mornings, no fire-damp will be detected in the lamp (although it is admitted by all who understand the subject that if the atmosphere contains but one-thirtieth part it can be detected), and within a foot of the same place it will explode with violence in the lamp. I have also incontestable proof of fire-damp being found on different occasions in levels where it occupied the uppermost stratum of the atmosphere for very considerable distances, and the stratum of atmosphere below entirely free from it. I have only seen this phenomenon on one occasion, and was enabled to crawl under the stratum of fire-damp for a distance of 150 yards, whilst in any portion of that distance for 3 ft. from the floor the air was perfectly good, the upper 2 ft. was of a highly explosive nature. There was no projection in the roof to account for it: the only hypothesis is that an imperceptible current of air served to keep the lower portion clear for such a distance, and by virtue of the light specific gravity of the upper stratum it occupied the highest position. Innumerable instances could be adduced showing that fire-damp, when left for any length of time without being disturbed or agitated, invariably occupies the highest position, and floats upon the denser air, just as oil floats upon water; but the reader will be enabled to see, from what has already been adduced, that explosive fire-damp is always found in the highest position, whilst, according to the theory of Dr. Gregory and others, the highest position of the mine would be occupied by a gas containing a greater percentage of carburetted hydrogen than would render it explosive, assuming the same law to be in force that causes the explosive carburetted hydrogen to rise from the lowest position.

As to the proportion of atmospheric air that is required to render fire-damp non-explosive, I will just give one carefully-conducted experiment. Two jig-brows were being driven up at a distance of 600 yards from the shaft, and by some means the air was temporarily suspended, and the brows, although 50 or 60 yards up, were filled with the fire-damp down to within a few yards of the bottom. In order to remove the gas without risk, all the men were sent out of the shaft, with the exception of two and myself, and a current of air was directed upon the gas, first taking out a stopping between the brows in the first cross-cut. The number of cubic feet of gas between each cross-cut was from 1800 to 1900, and the current of air at command was from 4000 to 4200 cubic feet per minute. It occupied a period of 12 minutes for the sulphur to pass a given point, thus proving that it required nearly thirty times the bulk of air as of fire-damp to dilute it, or carry it off. It even maintained its explosive power at a distance of 400 to 500 yards, but it was sensibly diminished after the first 200 yards, and at that distance from the brow it did not come in the air in such a manner as to constantly maintain its explosive power, but at intervals of from 4 to 12 seconds it would have exploded with the lamp in the highest position in the air-course. The result did not materially differ in removing the gas between each of the cross-cuts.

I have entered more fully into this part of the subject of the ventilation of mines than I contemplated, but hope that the importance of the subject will be considered an ample apology for so doing. JOS. GOODWIN.

## COLLIERY VENTILATION.

SIR,—I am not at all satisfied with Mr. Moore's figures. I have, indeed, before me the cost of fitting-up one of Struvé's ventilators, which considerably exceeds my estimate. The sum of 3000*l.*, I knew, was below the cost, but I wished to be moderate. The alleged economy in favour of the ventilator is merely theoretical—that is, comparing the quantity of air got in such cases by the consumption of a given amount of fuel. But the actual cost, when the machinery and cost of attendance in each case is taken into account, will, I feel assured, prove to be very much in favour of the furnace. Mr. Moore has taken no notice of my proposal to drain the goafs of gas by means of drifts in the seam to the rise. I still think the proposition deserving attention. ALEX. ROSS.

## COLLIERY VENTILATION—THE RISCA EXPLOSION.

SIR,—I notice in the Journal of Saturday that Mr. Brough stated that had there been 200,000 cubic feet of air passing through the Black Vein at the time of the explosion it would have happened notwithstanding. It is curious to note the vagaries of the twelve inspectors, and their contradictions in their yearly reports. During the whole examination he was constantly in quest of more air—nay, he even wanted a furnace to assist Struvé's machine, which that gentleman afterwards showed would have been more hurtful than otherwise. I recollect at the time I made the statement that had 200,000 cubic feet of air been in circulation there would have been no explosion. I maintain it still, and I see nothing in this report to convince me that it would not. I am amazed at Mr. Brough talking about laying off the long east side workings. What on earth had these to do with the explosion? Nothing whatever. The quantity of air was meted out by the gigantic air-pump, as he calls it, and what he wanted was to put on another if that could not be driven faster. The true cause of the explosion was want of air; the air current at that point was strong, but there was too little in the pit. Then, too, he speaks of unlocked Davy lamps and men smoking, as if these ever will be stopped.

One of the staidest "deputies" that ever I saw, and one who lost at least one son in Old Jarrold, told me himself he used to "get his pipe" by sucking a light through the "guise." No, it is all nonsense talking of locked lamps, and stopping men from smoking. Ventilate! Ventilate! I speak advisedly when I say that the best legislation for coal mines I know would be to prohibit the use of Davy lamps in mines altogether, except as tests, and make the masters responsible.

I read all the stuff about the Kirkless Hall Mine—the rents and such like in the pavement, and I daresay such rents may have taken place from the effects of the workings, and an issue of gas may have come from such rents; but had the coal been won out by narrow work, so that no crush could have taken place, the gas would have bled off, and there would have been no rents. Thirty years ago there was a Staffordshire man (Ryan) who seemed to have a pretty good idea of this, although he did not send in the quantity of air that would now be done.

There can be no doubt we know of no other remedy than better ventilation as a preventative of those explosions; and I repeat that if we had better ventilation we should have fewer explosions. The use of Davy lamps draws away the attention from this most important fact. The Davy is a sort of temporary expedient, and was never intended as a permanent instrument, and like all such is apt to be found wanting at the most important moment. Whenever I see a patent safety-cage I think I see a temptation to negligence; very likely when called upon to act it will be found defective. You are reducing the chances of safety by dividing the responsibility. Whenever I see a pit worked by Davy lamps I say the same. You are dividing the responsibility. You are slackening your vigilance. You want more

air, more room for it, and not Davy lamps. Set about it quickly, or you will have another Burradon, another Risca, before the year is past. The thing is plain. Who would temporise with gas? Sweep it away. Who would use a diving-bell if he could pump the water out? A PITMAN.

Aug. 1.

## VENTILATION OF COLLIERIES.

SIR,—In referring to the Birmingham meeting of the North of England Institute of Engineers, in last week's Journal, you very distinctly declare that my proposition for securing more complete ventilation in collieries is impracticable; but, fortunately, I am prepared not only to meet with such discouragement, but also to prove, by submitting my invention to a thorough investigation, that it will effect all I have promised. I can scarcely suppose that you include mine amongst "the plans of amateurs," although you are rather ambiguous on the point, for I have already done so much in preventing gas explosions above ground, that I feel myself competent to deal with underground explosions also. I admit with you that new inventions are too often passed over by practical men without notice, and am so thoroughly convinced that this circumstance may "too generally be attributed to prejudice or caprice," that I am almost inclined to say "I thank thee, Jew, for teaching me that word."

You compare the upcast and downcast shafts, with the passage connecting them, to a pipe, but forget that as soon as the workings are thrown out you have only a broken pipe, which is, of course, not worth much. But, be this as it may, I think I shall be able to show that my system is something more than placing "a smaller pipe within a larger one for the purpose of effecting what is tried to be done with the latter." You very accurately state that the advantages offered are—one shaft is sufficient, this is to be an upcast, the downcast air being taken down the pipes and supplied to each working place as required, thus dispensing entirely with doors and stoppings. Now, the advantage resulting from this is so immense that it can scarcely be estimated, for it should be remembered that explosions underground do not occur so frequently from the plan of laying out the colliery being bad as from some portion of the very complicated machinery, in the shape of doors and stoppings, being neglected or not working. But if the air were introduced through pipes direct to each working place, as I propose, every ounce of coal would be brought from the face to the pit's bottom without interfering with the ventilation at all—the pipes once laid, the supply of pure air is regular and uninterrupted.

You say that the introduction of pipes into mines is useless, because it is simply putting a small pipe into a larger one; but surely, Mr. Editor, you have not forgotten that there is this great difference—upon the ordinary system of ventilation, no one in the pit except the man at the bottom of the downcast shaft breathes fresh air; all the air now having to pass through and over all the decomposing matter in the mine that is left to accumulate for years; but, by the system I propose, every individual in the pit would do so. Every cubic foot of gas would be rendered perfectly harmless and innoxious before it left the working place, and this harmless mixture would at once commence to make its way to the shaft or shafts, all of which would become upcast shafts. With a pressure of 2 inches of water, all deleterious gases could be as easily removed from every part and corner of the pit as the water is removed from the diving-bell—indeed, the mode of supply is not very dissimilar; but the gases to be removed from the mine being so very much less dense than water, so little pressure would be required that the cost of keeping up the supply would be absolutely insignificant. I am quite willing that the merits of the invention should be thoroughly canvassed before it is adopted, and have no fear whatever concerning the success which it will meet with. R. H. HUGHES.

Atlas Safety Gas-Fitting Works, Hatton-garden.

## ACCIDENTS IN MINES.

SIR,—Our attention is called to the terrible lessons in killing, blinding, and otherwise mutilating the miner, almost every week. There are about 500,000 persons in Great Britain engaged in mining operations, and their united labour produces annually mineral wealth to the extent of 40,000,000*l.* sterling. It will be readily admitted that such a numerous and important class of persons are deserving of every human effort to obviate so far as possible the dire calamities connected with their occupation. It is said that the treacherous spark from the hidden spar cannot be anticipated; we think it is to some extent anticipated by those who recommend and use the "brass-shod tamping-bar," and we strongly recommend all persons engaged in blasting to adopt this and every other precaution, so that the miner, agent, and adventurer may not remain in the category of suicide, criminal and accessory; but while we advocate its adoption, we cannot think that it will be rendering explosion by its use simply impossible, because even the brass-shod bar might force the hidden spar against similar or other substances, and thereby bring to life the latent spark, so often the signal of destruction, and this might have been the case at East Louisa. While we commend the seal displayed for the brass-shod bar, and admit that the miners' calamities may be without a parallel, both in point of number and sufferings, yet it must be well known to all who are engaged in blasting operations that the iron tamping-bar is not the cause of all the killing, blinding, and otherwise mutilating which occur in connection with metallic mining, and only last week we have another instance in the sudden exploding of the hole at Camborne Vean Mine, when the men were picking it out (not using the tamping-bar) to renew the charge, that there is another cause—the blasting fuse now in use, and which is called a safety fuse, is not safety nor certainty, because it will ignite in tamping, and it will, and often does, hang fire, and it often explodes unawares, as in the case referred to.

It is, perhaps, impossible to make with the same material a better fuse than the one now in use, but it has radical defects—it is uncertain in its action, it cannot be depended upon, and, therefore, it is unsafe, hence the fearful amount of human life which is sacrificed is so much that in some mines the law is that no miner shall return during his core to any hole the fuse of which has been set fire to, but has hung fire. This standing law is a clear proof and acknowledgement of the uncertain and unsafe nature of the fuse. Human feeling and human effort have been put forth in this direction, and every philanthropist will rejoice to know that these efforts have been successful in producing the newly-invented patent metallic safety fuse, which will not ignite in tamping, nor hang fire nor explode unawares. Such being the case, all who have human feeling should recommend and adopt this and all other means to avert the fearful calamities complained of.

The sanitary state of the mines was referred to in the House of Commons on Tuesday last. The new patent metallic fuse will bear especially on this point, having no pitch, tar, tpe, hemp, &c., to burn and evaporate, causing that suffocating smoke so distressing to the operative.

Wadebridge, July 29.

HUMAN EFFORTS.

## MINERAL WEALTH OF NORTH WALES.

SIR,—Before proceeding to describe the several mining operations which are being carried on in this locality, I purpose giving a short geological exposition, for the benefit of such of your readers as may feel interested, and have had no opportunity of personal inspection; and in each succeeding letter to confine my remarks to such successive portions only as would admit of each day's pedestrian surface examination, commencing from the Talargoch, and travelling southward as far as the Minera Mines (the two grand extremes of its mineral resources). By the aid of an Ordnance Map it will not be difficult to mark out the several points which will be adverted to, and a line of demarcation may be gleaned, sufficiently accurate to fence off the perilous adventures which so frequently decoy the unwary, from the limited yet capacious bodies of rock which have encased vast wealth to past and present generations; and which, as I hope I shall be clearly able to explain, still contain an almost inexhaustible field for future enterprise. This mineral to the west, from the extensive Mold Mines, or, perhaps, I might say the Bryn Gwilog to the west, and thence in a somewhat interrupted and much disordered country as far as the Minera Mines. It is a matter of animated controversy as to whether the Bryn Gwilog falls within the limits of the second range, but as I intend presenting to the reader the arguments adopted on both sides of the question in a future letter, I will proceed, leaving the decision of this interesting question in abeyance. I may now, in fixing the eastern boundary of this rich channel, draw the reader's attention to the coal measures by which it is skirted and traversed for the whole distance. This is an infallible measure by which the practical and experienced miner finds his way, as in now yielding one of the leading features by which he rests satisfied that his operations are prosecuted in that metalliferous body of measures which has enriched the past and is now yielding great returns to the spirited companies by whom mining in it alone is confined, for on reaching the west the great bodies of ore become shallower, more intermittent, and uncertain, until reaching the primitive clay-slate, which it overlies to the westward, scarcely a vestige of mining is to be found, experience having taught even the most persevering, though incredulous, speculator the utter futility of his obstinate persistence. I am well aware there are some cases in which this channel is much broader than at others, and I may be told that there are exceptions of rich bodies of ore having in regular cases been found far to the west of the coal measures, and to these I will allude in regular succession by-and-by. To the west, on the primitive clay-slate, portions of old red sandstone sometimes intervene; and it is overlaid to the east in some places by partial layers of grit, and in others by large and irregular basins of chert, in which very extensive and profitable mines have been discovered. I may casually observe here that the peculiarities of the great deposits of lead in the latter rock elicit extraordinary care and skill, so much, in fact, that most important runs of ore are suddenly cut off, and some-



times remain for years undiscovered, until the tired miner grows weary of "hope deferred," and it eventually becomes the welcome treasure of the more fortunate and, perhaps, scientific miner in after years.—*Talaroch.*

A FLINTSHIRE MINER.

## Meetings of Mining Companies.

### MARIQUITA AND NEW GRANADA MINING COMPANY.

The sixth annual meeting of proprietors was held at the London Tavern, on Monday, Mr. R. A. ROUTH in the chair.

Mr. L. R. JONES (the secretary) read the notice convening the meeting. An abstract of the report and accounts appeared in last week's *Mining Journal*. The CHAIRMAN said, upon the present occasion he had the honour of proposing the reception and adoption of the ninth annual report of the proceedings of the Mariquita Company. As that report had been in the hands of the proprietors for some days, he presumed it had been partially, if not wholly, perused. He would not, therefore, trouble them with reading it, but would merely advert to the more important points, in order that proprietors might, if possible, have a more clear and lucid idea of the proceedings of the company for the past year. In the first place, it would be seen that the quantity of ore raised at the Santa Ana for the year ending March, 1861, was 2940 tons, which had produced \$4,771 ounces of fine silver, which was 55,858 ounces less than in the previous year. The same amount of silver, however, could have been produced in the previous year, if no regard had been had to the development of the mine; for it must be borne in mind that Capt. Ridgdon stated that he found the mine worked out of order very much. All the mineral that was broken in the 100 ft. level had to be wheeled to a winze, and to be drawn by hand tackle to the 90 ft. level, before it could be put to the shaft to be drawn to the surface, and that it would be several months before he could put a stop to that great expense. The reserves, too, were reduced to a minimum point. The directors were able to state that those complaints were removed, although the timbering of the mine had not yet been completed, and Capt. Ridgdon hoped by the end of ten days to be down, by means of a winze, to the 120 ft. level, and to have two years' work opened out. The quantity of ore stamped at the Mariquita Mines between March 31 and Feb. 28 had been 19,431 tons, and which had produced 5059 ounces of fine gold and 3150 ounces of fine silver. The profit for the year amounted to 10837, and when labour returned to its former level may be considerably increased. Relative to the Santa Ana Mine, it would be seen that they were reaching a point when, with safety to the permanent interests of the company, the returns may be maintained at a profitable point. The prospects of the mine as regards the supply of mineral are encouraging in the highest degree. With regard to Mariquita, he might just remark that, had the revolution not intervened, the year ending March, 1861, would have given a profit large in comparison with that of any year since 1850. By the profit and loss account it was shown that upon the Mariquita Mine there had been a profit of about 10007, which had been written off by the loss upon the Santa Ana Mines. Reviewing the operations of the past year, there could be no question that they were in a state of considerable advancement. It was to be recollected that this time last year the whole of the reserves of the mine were exhausted—to such an extent, indeed, that the mine itself was in considerable danger of collapsing from want of timber. At that time, gentlemen, we were in a very false position with regard to the acknowledged position of the mine—they did not understand how they were situated with regard to their own agent (Mr. Birchall), who, at the present time, he (the Chairman) was happy to say was in the room—they were not aware how closely their reserves had been stretched upon the amount of labour that would be required to save the mine collapsing. He was happy to say, however, that impending evil had been altogether remedied, and the Santa Ana Mine was now in an efficient state of working, and their object and hope would be that during the next year it would be brought into a profitable condition. The last year had been one of unceasing labour and anxiety to every officer of the company in New Granada, and he might say to every member of the board; and it was with great pleasure he was able to tell them that they had done an amount of work which he had considered utterly impossible, knowing the manner in which the mine had been left, and the unbusiness-like way in which everything had been managed, and the regret that he had more or less interfered with the progress of their operations, all he could say was that, as a commercial body, they were deeply indebted both to the New Granadian Government and also to General Mosquera, the leader of the Liberal party, for their attention and assistance consistently with the troubled condition of the country. The company had had its property respected, although some interruption to their operations had taken place by reason of the stores lying at the ports, and from the non-removal of the mine produce, and by the abstraction of labour into the mountains. As a public body, however, they had met with much respect and attention, and he must say he was surprised they had done so well as they had under such adverse circumstances, for they had made very considerable progress with the shaft. That morning they had received despatches from New Granada, to the effect that the strike, which had lasted during a period of twelve months, had to all human appearances terminated. Shareholders had doubtless read in the *Times* of that morning that the plain of Bogota was strewn with the bodies of the dead; that Mosquera had been successful; and that Bogota was at that moment in the possession of the Liberal party. Therefore they might, without trespassing upon the imagination, augur that the revolution had terminated. If so, they would have no further trouble with regard to labour, or the transport of their stores or produce. But, at the same time, it was impossible to say that labour would flow back; but it was by no means unreasonable to conjecture that they would soon obtain sufficient labour for their requirements at Santa Ana. To show the effect the revolution had had upon the labour of the Mariquita district, he might mention that during 1860 there were employed at and about the mine about 500 men and boys; whereas at the beginning of the present year there were only about 22 men and 20 boys. As regarded the company's finances, after paying off the banker, there would remain about 7000, clear in money to carry on their affairs—that, in fact, was the working capital they had raised. Out of the 73007, proposed to be raised upon debenture there remained about 23007. By the advice just received it was shown that the cost of the Santa Ana Mine for April amounted to \$7811, and the returns to \$7856; and that of May to \$9319, and the returns to \$10,210; so that Santa Ana had covered its cost and left a small profit. The Mariquita cost amounted to \$7650, and the returns to \$7376, showing a small loss upon that month's operations. The accounts and balance-sheet had been thoroughly investigated, and weeded of a good deal of rubbish, by a public accountant. Mr. Birchall, he was glad to say, had accepted the office of resident superintendent at Santa Ana.

Mr. FATHALLAH felt rather astonished the directors should have called in a public accountant while the company paid for the services of two auditors, who had not, it was true, discovered the errors in the accounts.

The CHAIRMAN did not think that any auditor, with the greatest intelligence he could bring to bear, would have discovered what had been discovered by the public accountant. He discovered that the stores were a very problematical asset—they were sent out from this side and got credited on the other side, and although they were used on the other side, their value was never struck off, so that, in fact, it was an asset without a representative value.—Mr. CHRISTOPHER RICHARDSON said that the deficiency arose, in fact, from a mere adjustment of the account.

The CHAIRMAN reminded the meeting that the cost of the Purima Mine had been written off as a loss.

Mr. GEORGE (one of the auditors) said the apparent difference in the accounts mainly arose from the decision that the cost of the Purima Mine should be written off; but were errors to be blamed, he would ask, because that was not written off before? Would the shareholders on the board sanction the auditors at their will striking off one-third of the company's capital? The duty of auditors was to see that every account was properly audited, and that they agreed with the items charged, and not to interfere with the management, in which the company's business was carried on—that was a question for shareholders, and shareholders alone.

The SOLICITOR, in answer to a question, stated that by the supplemental deed both auditors were appointed by the shareholders.

Mr. SPENCER HERAPATH said that the difference in their accounts now and at the last meeting arose from the simple fact that they had been altogether remodelled. They had had a different mode of looking at their financial position. The item of the Purima account had always been considered very questionable, and it had at last been written off, which had given rise to a large apparent surplus. Anybody would have been wanting in intelligence, indeed, if they had not regarded the Purima item, to all intents and purposes, a questionable asset.

Mr. C. RICHARDSON said that although their accounts were not in a very flourishing condition, yet he must congratulate his co-proprietors upon the fact that for the first time since he had been a shareholder of that company they had a true and honest balance-sheet. He believed that if it had not been for the care and attention given by the public accountant they would never have known their exact financial position. He must congratulate them upon having at length written off the Purima sham, and upon that account he had much pleasure in seconding the reception and adoption of the report and accounts.

Mr. FATHALLAH enquired if any steps had been taken with regard to the reduction of the rent of the company's offices?—The CHAIRMAN said he had given that question some considerable attention, but at present he could not see that any reduction could be made, but other reductions had been and would continue to be made—in fact, the greatest economy would be exercised in all departments. It was satisfactory to find that the latest despatches from the mine informed them that "the state of the lode was favourable, and there was every prospect of abundance of mineral the deeper the works progressed." In point of fact, the mining reports were satisfactory in the extreme.

The report and accounts were then unanimously adopted.

Mr. BIRCHALL, who had been accepted the post of resident superintendent at Santa Ana, stated that he could not hope to put before proprietors anything very new, or give any information beyond that contained in the directors' report. It was with no small pleasure that he, for the first time, met face to face those interested in the mining establishments of the company, for nothing but good could come from a personal acquaintance of those whose property one was entrusted with—the servant having the personal acquaintance of his employers. During the three years he had been directly in the employment of the company he had felt this difficulty—that he was dealing with men he did not know; but that difficulty had now been happily removed. There could be no doubt that they had passed through a period of unexampled difficulty, but that had passed away. Although nearly two years had elapsed since dividends had been paid, the cessation having been occasioned by the adoption of precautionary measures to prevent the destruction of the property, he could not see there was anything at which to be dissatisfied, as the assumption was that, instead of spasmodic dividends, their property would be brought into a permanently paying state. It would have been perfectly competent for the company to have paid dividends up to the present time, but then they would have been exposed, and they would have had to contend against the evils to which their property was exposed. But by the course at present being adopted not only had the security of the mine been preserved, but the mineral could be extracted much more readily, and at a considerably cheaper rate. The statement which appeared in the *Mining Journal* did not appear to be an exactly fair representation, for it was perfectly idle to tell those who entered into mining pursuit that their plant was worth nothing. It was not to be supposed that the 103,000 shares were worth the original capital subscribed, nor could they imagine that they had still their working capital to set against the subscribed capital. America, wanting nothing in the shape of plant; and when the mine was opened in a probability, be continued. By this time next year the new shaft would be down to the proportionally decrease. It was the opinion of all practical authorities that the value of the ore in Santa Ana would increase the deeper the operations were prosecuted.

The CHAIRMAN enquired whether, now that the new shaft was down to the 90, the ventilation of the mine had been improved?—Mr. BIRCHALL replied that the ventilation had been very considerably improved. Several stations were now in work which had been entirely suspended in consequence of the vitiated state of the air.

The CHAIRMAN inquired the average produce of the rough ore extracted from Santa Ana?—Mr. BIRCHALL replied about 50 to 60 cwt. per ton; but by the process well known to proprietors it was able to produce between 160 and 160 cwt. to the ton.

The CHAIRMAN could not help thinking that a mine producing ore of about 60 cwt. to the ton ought to produce a good profit.

The retiring directors, Sir C. H. J. Rich and Mr. John Macdonnell, were then re-elected directors; and the retiring auditors, Messrs. George and Herapath, were re-appointed.

The usual remuneration to the directors for their services during the past year, and the

amount to the auditors having been voted, the proceedings terminated with a vote of thanks to the Chairman and directors.

Since the report has been printed, the following despatches were received on same day:—**SANTA ANA MINES:** April cost, \$7811; returns, \$8756. May cost, \$9319; returns, \$10,210. —Report for May: In the 110 ft. level end, north of winze, the lode is about 5 ft. wide. It is composed of quartz, pyrites, and a little grey silver, yielding good dry stamps mineral. In the winze in the bottom of the 110 ft. level the lode is 1 ft. wide, much the same as last reported; sunk 2 ft. 6 in. last month. In the slope in back of the 110 ft. level, north of winze, the lode is about 8 ft. wide in the part stopped last month; it has a rich leader of pyrites 2 ft. wide on the west side, and the other parts of it are composed of quartz, pyrites, grey and a little red silver; it is a very rich lode—stopped 2 fathoms 1 foot 7 inches last month. In the slope in the back of the 100 ft. level, north of winze, the lode is about 6 feet wide, with bunches of dry stamps mineral in it; stopped 3 feet last month. The winze in bottom of the 90 ft. level, the ground is favourable for sinking; sunk 1 ft. 6 in. last month. The new shaft, cutting down below the 80, cut down 6 ft. last month. The tramroad was completed to the first winze about 60 fms. on the 8th of last month, the day after the iron was brought here; I was obliged to fix about 15 fms. of wood rails to complete it to that winze for want of iron. The prospects of the mine continue very good.—**MARIQUITA MINES:** For March, cost \$7619, returns, \$8795.—**PURIMA MINES:** For March, cost \$540; returns, \$812.

### PORT PHILLIP AND COLONIAL GOLD MINING COMPANY.

An extraordinary general meeting of proprietors was held at the London Tavern, on Wednesday, for the purpose of considering a statement of the proceedings of the company since the general annual meeting, also a statement of its present financial position, and for the purpose of passing a resolution enabling the directors (should the meeting so resolve) to distribute 1s. per share.—Mr. J. D. POWLES in the chair.

Mr. C. H. FIELDER having read the notice convening the meeting,

The CHAIRMAN said.—The notice which has just been read states the objects for which this extraordinary general meeting has been called. A brief statement of the proceedings of the company since the annual meeting in January last has been circulated among the proprietors. I will, with your permission, add to it such explanatory particulars as may enable the proprietors fully to understand the present position of the company. The amount of profit for the six months, from Oct. 1 to March 31 last, will have been, as seen, 10,987. 7s. 5d. This is the highest rate of profit that has yet been attained since the company commenced its operations at Clunes. The preceding year, ending Sept. 30, gave only 13,190. 7s. 5d. for the whole year. The month of April has given a profit of 2306. 7s. 9d.; and, as far as can be seen from the quality of the mineral passing through the stamps, the profit for the month of May will be much the same as that of April. In attempting to form an estimate of the probable continuance of this state of profit we have to look mainly at two things,—the capability of the mine to continue the supply of quartz to an extent necessary to keep the stamping-mills supplied; and to the quality of the mineral to be produced. With respect to the first point, we have before us the report of Mr. Harvey, the able manager of the mine of Clunes, made to the shareholders in that company at their meeting on May 4 last, which we received by the last mail, and from which the following are extracts:—

"The most important feature in the last six months' operations is the increased yield, being nearly 4 dwts. per ton in excess of the previous half-year. It is satisfactory to be able to lay before the shareholders such statements respecting the yield, which, besides giving additional value to the mine, must, undoubtedly, tend to set at rest the question of the reefs becoming poorer in depth. It setting aside the question of the reefs ceasing to be productive as we descend, there can be no doubt the result of the past six months' operations has placed the company in a better position than ever it was before, and given substantial proof of the opinion I expressed at the last half-yearly meeting. 'I estimate the amount of quartz now in sight equal to 50,000 tons, taking the average width of reefs at 6 feet, which is a low average.' On this question it is proper to remark that no accurate conclusion can be drawn from a comparison of the yield of the gold during the earlier and latter periods of the company's proceedings at Clunes, because in the former period the quartz was picked and the inferior quality thrown out, whereas latterly the whole mass has been treated. The agreement between the Port Phillip Company and the Clunes Mining Company, after paying the charge to be paid by the mining company for crushing the quartz at 32 per ton, the miners only delivered such quartz to the company as would bear that charge, putting aside, as possessing no realisable value, the inferior portions. Mr. Bland, in his letter of Feb. 13, 1857, advising the concluding of the agreement, says, 'In the lease the lessees have power to reject quartz yielding one ounce and under to the ton; this will enable the miners to pick the quartz.' In order to prevent the sacrifice of mineral which this system involved a modification of the agreement was made two years afterwards, by which a different principle was adopted. Instead of this company making a fixed charge for crushing, it was agreed that the whole produce of the gold should be divided equally between the Clunes Company and the Port Phillip Company, after paying to the owners of the ground the royalty of 7 1/2 per cent. Under this agreement the whole of the quartz has since been brought to the stamps, without being picked. This arrangement has worked well for both parties. The cost of crushing has, under Mr. Bland's good management and that of the staff employed under him, been so reduced as to afford a good profit to the company on the treatment of the whole mass of mineral, although of so much lower an average quality than that brought to the stamps for crushing in the earlier stage of the company's proceedings. It is obvious that any comparison attempted to be drawn under a state of things so unequal must be wholly fallacious. Mr. Bland writes on this head, Dec. 24 last:—

"At the beginning we only crushed the best quartz; since then, as we increased our plant, we have been taking what we know to be poorer material, and latterly even the quartz thrown aside at first as worthless has been sent to the mills, thus further reducing the average yield. The depth has nothing to do with it, as it comes from all parts of the mine, from the surface downwards. In another year our average may probably be still further reduced, as one of the quartz veins—the 'Old Man Vein,' as it is called—is almost untouched from the surface, as on trying a few tons we considered it too poor to be worth raising and crushing at the then cost of this work. Having lately increased the efficiency of our plant, we may possibly shortly commence to work this vein, which, I believe, will give us a yield of 6 or 7 dwts. per ton." There can be no doubt that the question whether our auriferous quartz does hold its value in depth, is one highly interesting to this company, but, commercially speaking, it is a question of degree. The mineral nearest the surface may be richer than that which is below the surface, but the latter may be of a quality amply remunerative to the miner notwithstanding. The consideration which really concerns the company is,—Whether as we advance more extensively into the mineral deposit we find the ore of a quality to yield a profit or not? And the fact which we have before us, in answer to this enquiry, is that the last six months' working have been the best that the company has had,—that with mineral yielding 15 dwts. 15 grs. per ton, the company is enabled to realise a profit of 20,000 per cent. And, as has been stated before, that the yield per ton of the last six months is a considerable improvement on the six months immediately preceding. Mr. Selwyn, the Government Geologist in the colony, in reporting on the Clunes Mine in Feb., 1858, makes the following remarks on this question:—

"I shall now make a few remarks respecting the oft-repeated and very generally received theory, that no gold quartz veins can be profitably worked to great depths, and that the richest and only remunerative portions of them are invariably at or near the surface. To a certain extent this is undoubtedly true; namely, that the quartz which once constituted the upper portion of these veins contained infinitely more gold than any of those portions which still remain *in situ*, and the best proof of this is found in the large masses of gold which of such frequent occurrence in the drifts, and the non-occurrence of any such masses in those portions of the quartz reefs which are now being artificially broken up; the whole of the drift, with the gold contained in it, having undoubtedly been derived from what was once the highest portion of these veins and of the rocks traversed by them. In connection with this, however, we must not lose sight of the fact that many thousands of vertical feet of strata, with their associated quartz veins, have been naturally broken up and distributed before producing the effect; and the fact that the veins are still rich at the present surface, once many thousand feet deep, goes far to prove that this diminution of yield in depth is so low as not to be appreciable within such depths as are reached in ordinary mining operations. It must also be remembered that the denudation and upheaval which broke up and distributed these old auriferous reefs was very extensive in action over large areas, and, consequently, the present outcrop of different portions of the same vein, all equally rich, are in reality, as regards original depth, often many hundred feet asunder. For these reasons I am of opinion that the fact of the diminution of yield in depth, though absolutely true, cannot be regarded as of any real practical importance to the miner, or be advanced as a reason for gold quartz mines becoming rapidly unproductive; and there appears no reason why, with judicious combination of capital and labour, and improved mechanical appliances, many of our quartz reefs should not be profitably worked to depths of 500 ft. or even 1000 ft., and be as permanent sources of wealth as the tin and copper mines of Great Britain."

These remarks, founded on scientific consideration, have been thus far corroborated by practical experience, as will be seen from the following reports from Mr. Harvey, the mine agent, who is managing the Clunes Mine. Extracts from Mr. Harvey's reports:—**Oct., 1859.**—The great feature of these reefs is their regularity of yield, as well as the large amount of quartz which can be raised, hence the success of the company. Had there been any falling-off in the yield we should have been doubtful of the reefs continuing productive. Such is not likely to be the case, as in the deepest workings of the mine we find the bearing channels of the reefs looking as promising as ever."  
**Nov. 12, 1860.**—The appearance of the underground workings on the several reefs is, without exception, still maintaining the same regular character. At times a slight deviation occurs; but, as a general rule, the regularity of the same unvarying appearance throughout the mine, showing no indication of becoming poorer or cutting out in depth. The various portions of the reefs which on surface gave some very good returns when only a portion of the vein was taken out continue equally as good, and can be traced in continuous runs to the lowest workings of the mine."

It may not be unsuitable here to interpose a word of caution with respect to the advice published by the directors monthly in the newspapers, as received from Melbourne; and that is, not to draw any conclusion, either favourable or otherwise, from the produce of any single month. Variations must occur, from causes sufficiently evident. In the six months from April to Sept., inclusive, the lowest monthly yield was 11 dwts. 12 grs. per ton; the highest 16 dwts. 14 grs. per ton. In the six months from Oct. to March, inclusive, the lowest monthly yield was 11 dwts. 13 grs. per ton; the highest 1 oz. 0 dwts. 3 grs. per ton. Nothing short of an average of six months can be taken as a fair test of the value of the mineral. I may also mention that at the end of every six months the last month of the period receives an accession of income from the clearing-up of the beds of the stamps, which takes place every six months. Thus, the profit of the month of March was 2207. 1s. 2d., but in this return is included the sum of 9157, the company's proportion of gold found in the stamp-beds. This will always occur in the months of March and September. It is also extremely probable, according to the advice last received, that there may be a falling-off in the supply of mineral during the next six months, as the Clunes Company is about deepening the north shaft in the mine 240 ft.; and while this is going on Mr. Harvey thinks it very likely that they may not be able to keep up the supply to keep the stamps fully at work. In looking at the present improved position of the company, it may not be out of place to take a glance at the past. This company was one of those formed in the early part of the year 1852 for gold mining in Australia; and it is the only one of those formed at that time for that continent that has survived. Its first years were years of disappointment. The company met with no protection whatever from the Colonial Government, notwithstanding the assurances which had been given on that head by the Home Government. The directors were always poor, and, however, notwithstanding the obstacles they met with, that there must be a good mining field in the colony of Victoria. The result of this perseverance, under the able and prudent management of their co-director in the colony, is what is now seen. But there is a consideration which ought not to be kept from the view of the shareholders, and which on former occasions the directors have placed before them; it is this, that the company wholly depends upon one mine. It is quite true that, under the existing arrangements, the company encounters none of the mining risk. If from any unforeseen casualty the mine should come to be worked at a loss instead of a profit, no part of that loss would fall on the company; but if the mine should cease to be worked the company would at once be deprived of its source of income. It was in view of this state of things, and to carry out a principle well understood in mining adventure, that it was decided to hold an acre of the land on which the directors have since instructed Mr. Bland to secure for this company an interest in other mining concerns, as

opportunity might offer. The directors felt that the position which this company had acquired in the colony, and the experience which had been gained during the last few years of the value of the different mining localities there, ought, under the prudent and sagacious management of Mr. Bland, to be turned to account. Some engagements were accordingly entered into; but as they were not approved by the shareholders they were brought to a close. A company has since been formed, with limited liability, called the Victoria (London) Mining Company, which has taken over the Nintinbool undertaking from the Port Phillip Company. The shareholders in the Port Phillip Company have now the opportunity of entering into this company, if they think fit, and thereby placing themselves in a position to avail themselves of the advantages which the improved position of the colony holds out, and of providing themselves with a collateral resource in the event of any disappointment occurring at Clunes. I have now to draw the attention of the meeting to the consideration of a distribution of profit, to which the technical term of dividend is not applicable, as it appears, from the construction of our deed, that we can only declare dividends at the annual meeting in January. The available surplus, it will be seen by the statement circulated among the shareholders, is 10,451. To make a distribution of 1s. per share will take 4875; reserved fund (10 per cent.), 4871.—5362. The directors are of opinion that it would not be expedient to propose a larger distribution than 1s. per share at the present time. They feel that now the company has recommenced the payment of dividends it is most desirable that regularity should be ensured for the future, as far as is in the nature of things attainable. The company is making a net income of about 18,000, per annum; and if that continues, undoubtedly the proprietors may next year look to larger half-yearly dividends than 1s. per share (which is, however, 10 per cent. on the capital); but this object will be all the more surely attained by keeping a good balance in hand at the present time. The money is not lying idle; it is gaining a good interest at the London Joint-Stock Bank. It is, moreover, always to be kept in mind that, on however good a foundation the company may be now standing, temporary hindrances may occur. A want of water, a falling in of ground, or some other mining casualty, which will always be better encountered by a wholesome state of finance. The reserve fund consists of 16021. 8s. 4d. Consols, and will be increased by the present dividend; but it must take some time before that fund can attain such dimensions as to enable it to meet any serious interruptions in the company's profits. I am aware that the board has anything more to add in the shape of information, but we are fortunate enough to be favoured with the presence of a gentleman who can add verbally a great deal of information from personal knowledge. Since the commencement of our operations we have had upon several occasions the advantage of the eminent legal assistance of Mr. Klingender, all his endeavours having hitherto proved successful in resisting the attempts of what are called "outsiders" in interfering with our rights. It so happens, that Mr. Klingender, feeling an interest in the company's concerns, has paid several visits to Clunes, and I dare say thoroughly understands the position of matters there. It is something for the company's prospects to know that he has recently made himself one of the largest shareholders.

Mr. SPENCER HERAPATH had some conversation with Mr. Klingender, and the general and local information that gentleman could convey to the shareholders he (Mr. Herapath) was sure would be gratefully accepted. The great question for them was to ascertain the probable durability of the property.

Mr. KLINGENDER said his opinion agreed with that generally entertained in the colony, that the property was practically inexhaustible. That was the general opinion, and certainly there was no earthly reason why it should not be productively worked to as great a depth as the mines of Cornwall and Devon. The last time he communicated with Mr. Harvey, the manager at Clunes, and who was a very careful man, he was informed that there was then four years' ore in sight, without deepening the mine at all—enough, indeed, without further exploration, to keep the stamps fully at work during that period.

Mr. STOCK enquired what had been the profit for the month of May?—The CHAIRMAN said they believed the profit would be about the same as for the month of April. They could tell pretty well from the returns of quartz.

Mr. STOCK said the statement of finances sent out to the shareholders did not state up to what date they were brought up.

The CHAIRMAN said they were brought up to the last week. Mr. STOCK said it appeared, then, that there was a sum of 10,400, available for distribution, and the board proposed to divide only 1s. per share should be distributed, although the profits of the company were so good as to lead them to hope that another 10,000, might be realised in the next six months. He thought shareholders might reasonably ask for 1s. 6d. or 2s. per share.

Mr. HERAPATH was anxious for a larger distribution than that proposed by the board as any shareholder. But in the concerns of a public company like that they should exercise the same policy as they, as commercial men, would adopt in the management of their own affairs. There was nothing so essential to success as a sound, healthy state of finance. He urged the adoption of the proposition of the board, the more particularly as a healthy state of finance would assist the committee in the carrying out of a scheme which they believed was practicable, and if carried out would have a most material effect upon the value of the shares of that company. Mr. Klingender had also made them acquainted with the desirability of an important change—that of having colonial registration, or rather the registration of the shares in the colony, which would enable the colonists to hold shares with greater facility than at present. That was one change, if the present company were dissolved and reconstructed under limited liability, which the committee would import into it. Under those circumstances, he considered it undesirable to propose an increased distribution upon the present occasion, because it was of infinite importance that the road should be clear for altering the constitution of the company. He did not hesitate to say that he considered there were other reefs to be mined; for instance, the appointment of auditors should be entirely with the shareholders. Mr. STOCK must confess that he had not been convinced by the argument of Mr. Herapath that a distribution of 1s. 6d. or 2s. per share should not be declared. Seeing that they had a monthly income of about 20007, he could not conceive how such a distribution could be prejudicial to the company's interests. According to Mr. Klingender, who appeared to have based his opinion upon the best authorities, there would be no perceptible difference in the yield of gold, and, therefore, by adopting his proposition of an increased distribution there would still be left a good margin in the hands of the directors. He concluded by moving an amendment that a distribution of 1s. 6d. per share be made.—Mr. WESTER seconded the amendment.

Mr. CONNELL (one of the committee) stated that as the committee were desirous as soon as possible of convening the shareholders together to take their sentiments upon the desirability of the change which it had occurred to their committee it was very proper to take, as it would be attended with ultimate benefit to the interests of the company. Upon that ground he would urge that the proposition of the directors be adopted, for the better their financial position the more would the position of the committee be strengthened.—Mr. MAGNUS did not think it possible that the company could be made a limited liability company.

Mr. HERAPATH was satisfied if the scheme which the committee were about to propose were adopted, the shares would be increased to double their present value; and the question of limited liability was of far greater importance than the question of 6d. per share distribution.

Mr. MAGNUS was persuaded that, without dissolving the present company, it could not be brought under the Limited Liability Act.

Mr. KLINGENDER could see no possible objection to the present company being dissolved—no reasonable man could object to it.

Mr. STOCK enquired if the distribution of 1s. 6d. per share, instead of 1s., would affect the question of limited liability?—Mr. KLINGENDER did not see that it could have any possible effect.

The CHAIRMAN said they must congratulate each other upon the altered position of the company, for some time since it had been proposed, meeting after meeting, to wind-up the company; but now they were disputing what should be the amount of distribution. The directors had a prudent regard for the welfare of the company, and when the question referred to by the committee came forward it would be met with the hearty concurrence of the directors. The object of the board was to make the dividends periodically, and he reminded the meeting that the undivided profits were yielding 4 1/2 per cent. interest. The company's solicitor had informed him that they could not pass any other resolution than that submitted in the notice. The proposition must either be negatived or adopted. As to the appointment of auditors, a clause was inserted in the deed that one should be appointed by the board and one by the shareholders, but he was quite sure that the question came to be discussed, there would be no objection on the directors' part of the table to both auditors being appointed by the shareholders.

Mr. ROWDEN (the company's solicitor) said the clause of the deed relating to dividends stipulated that they must be paid out of the profits of the past year; therefore, that must be borne in mind in making the distribution of profit for the half-year. Besides which he most certainly thought the amendment could not be put. The dividend clause did not affect that meeting, which was an extraordinary one, called for a special purpose.

The resolution being put was carried with but two dissentients.

A vote of thanks to the Chairman and directors was passed, when the proceedings terminated.

### DUN MOUNTAIN COPPER MINING COMPANY.

An ordinary general meeting of shareholders was held at the London Tavern, Bishopsgate-street, on Wednesday.—Mr. ARNOLD ROGERS in the chair.

Mr. F. SAUNDERS (the secretary) read the advertisement convening the meeting, and the minutes of the last were read and confirmed.

The report of the directors stated that the railway, as laid out by Mr. Fitzgibbon, would run from their chrome mines, by the contour and slopes of the mountains, to the Brook-street Valley, thence into the streets of Nelson, and terminate at or near to the Government Wharf. It was expected such portion of it would be completed by Christmas to enable them to convey the ore to the town, and thence by carts to the port of shipment. The directors congratulated the shareholders upon the steadily improving prospects of the undertaking, which was attributable to the approaching completion of the railway, the quantity of chrome ore prepared and "in sight," and the further acquisition of valuable mineral lands in the Dun Mountain district.

The accounts showed a balance of assets over liabilities of 17,438. 9s.

The CHAIRMAN, in moving the adoption of the report and accounts, stated that the board were waiting with great anxiety for the completion of the railway, which they considered to be the only desideratum to enable them to undertake the ore to a profitable condition. The main mineral explorations had been suspended, in order that the whole of their efforts might be exercised to bring about as quickly as possible that which they look forward to with so much interest—the completion of their railway. As regarded the chrome ore, he was glad to say that they not only had plenty of material, but that there was a very good and ready market for it, at a price which would leave a good profit to the company. As regards the engineering departments, shareholders were, doubtless, aware that they were for a long time without having anything satisfactory, until, indeed, Mr. Doyne, accompanied by his assistant engineer, Mr. Fitzgibbon, went out. It was extremely fortunate for the company that they had gone out for they had rendered services of the utmost value.—In short, Mr. Fitzgibbon had proved himself a man of great energy and ability. The board feeling there existed no further necessity for a mining manager, thought it much better that the appointment of general manager should be conferred upon Mr. Fitzgibbon, the more especially as he was a mining and a practical engineer. Arrangements had, accordingly, been entered into with him for three years, and the board had every reason to be perfectly satisfied with the manner and vigour with which he appeared to be conducting the company's operations. Therefore, the only thing which they were waiting for was the sufficient progress of the works to enable them to transmit the ore from the mines to the port of shipment. The New Zealand labour market, it probably was known, was spasmodically affected by the suspension of the gold fields; but it was likely a large accession of labour would soon take place by reason of the operations at the gold fields being suspended during the winter. Under any circumstances, however, the board had suggested that labour must be obtained, as progress was all that was required. The earthworks of the first four miles of the most difficult portion of the line would, he expected, be completed by the winter, so that the men would be able to work during the inclement season upon the lower parts of the line, so that if the Nelson winter proved favourable the first 10 miles would be completed by Christmas. It would, perhaps, be recollected that the company had free access to their line from the mine to the wharf, with the exception of a small estate, situated at the outskirts of the town of Nelson. By the lease of the Nelson estate, that piece of land had been acquired on behalf of the company upon very advantageous terms. They had now, therefore, a right of way from the mines down to the wharf. To traverse the high roads, however, it was quite necessary to obtain an Act, which would not only give them that power, but would also enable them to success-



fully treat with the owners of the property, in the event of their demanding high terms. That they did not think it necessary, for their absence alone had prevented them from giving their sanction. He might also mention that the land recently acquired abounded in mineral, limestone, and timber. There was nothing but the strictest economy practised, and everything was as encouraging as it possibly could be. The quantity of chrome ore stacked ready for shipment now amounted to 3500 tons, so that the total quantity in reserve was about 11,000 tons. They had recently opened a new reef, which was producing a richer quality of ore than had yet been produced, and there were two other reefs discovered of very rich ore; therefore the quantity appeared infinitely greater than had hitherto been supposed. A suggestion having been made that it would be prudent to have a proper working or rolling stock in hand, a liberal supply had been ordered, and everything necessary would be supplied with the utmost dispatch. The next point was with regard to the 4000 shares which had been reserved for the shares issued had been allotted exclusively and entirely to the shareholders, and the Board did not think it advisable to extend the allotment, because they thought it possible the market value of the shares would be increased. If it were determined to allot the remainder of the shares, they would be issued at certainly not less than par. The financial position of the company was as satisfactory as could be expected, considering the expenditure that had been made; and when they recollect the amount of work that had been done, the board of directors had no reason to be dissatisfied with the expenditure upon the other side. He could not refrain from stating that he did not upon that occasion meet the proprietors with the same amount of satisfaction that he had met them upon former occasions. It had been their misfortune to lose by death two of their oldest directors, and the staunchest supporters of the enterprise. In the room of Mr. Morrison, whose loss they much deplored, the board had elected his friend and partner, Mr. Selander, who had been working for the company for many years, having been Chairman of the Nelson committee at its formation. His co-operation, from his long connection with the company, his thorough knowledge of Nelson, and his intimate acquaintance with the members of the Nelson committee, would, no doubt, prove a valuable acquisition to the company. The board, considering five members ample to transact the company's business, did not propose filling up the vacancy occasioned by the demise of Mr. Hayner. Having congratulated the shareholders upon the exceedingly encouraging prospects which their undertaking presented, he concluded by moving the adoption of the report and balance-sheet. —Mr. BUCKLEY had much pleasure in seconding the proposition.

Mr. VANCE, after having expressed great regret at the loss the company had sustained by the death of two of their directors, congratulated his fellow-proprietors upon the pleasure of again meeting their esteemed and worthy Chairman (Mr. Rogers); for to his zeal they were deeply indebted for the present encouraging position of the company.

The CHAIRMAN expressed his obligations to the hon. proprietor for his congratulations; but he assured the meeting that, although sometimes absent from that chair, it gave him an opportunity when in his chamber of working more vigorously for the company.

Mr. AUBRECHT (a chemical broker), referring to the great demand for chrome ore, stated that he could readily sell upon contract between 4000 and 5000 tons per annum, and that bi-chrome makers hailed with delight the fact that there had sprung up a new and apparently inexhaustible source of supply. Any quantity would be readily disposed of, at prices which would leave a handsome profit to the company.

The CHAIRMAN said that it could not fail to be satisfactory to know that they had an inexhaustible supply of the chrome of iron, and there appeared to be a demand, at highly remunerative rates, equal to any supply. In fact, all they wanted was the completion of the railway to bring their enterprise into a permanently dividend-paying condition.

The report and accounts were then adopted, and a unanimous vote of thanks passed to the Chairman and directors, when the proceedings terminated.

### AUSTRALIAN MINING COMPANY.

The ordinary general meeting of proprietors was held at the London Tavern, on Monday, Mr. G. PALMER in the chair.

The notice convening the meeting having been read, the secretary submitted the report of the directors, as follows:—

In the last annual report which the directors had the honour to make to the shareholders of the Australian Mining Company they were informed that, in compliance with the resolution of a majority present at the general meeting of July 30, 1859, the board had confined their efforts to the work of bringing the concerns of the company into as simple and favourable a position as possible, with a view to the final winding-up of its affairs at an early period.

During the past year the following sales have been effected in the colony:—Land at Allen's Creek, comprising 247 acres for £7251, stores and mining materials, 2401, 19s. 7d. The last balance-sheet showed a balance in hand on June 15, 1860, of £2651. 5s., whilst the present balance-sheet shows a sum on deposit at interest at banker's, amounting to £2000, and a balance at banker's on current account £357. 15s. 3d., and petty cash in hand £131. 18s. 9d. Since the close of the annual account on June 15 last remittances have been received from the colony amounting to £1007, and by last mail an estimate of outstanding debts due and coming due to the company within the next six months has been received from the company's agent, amounting (subject to some trifling deductions) to £2439. 0s. 7d. In pursuance of the resolution of the majority of the proprietors present at the general meeting of July 30, 1859, the Tunglikillo and Charlton properties were offered for sale at the Auction Mart, on the 23d inst., but were not sold; the only offer being £5000, for Tunglikillo, and £3000, for Charlton.

**LAND AT ALLEN'S CREEK.**—The directors have to report that the 247 acres remaining unsold at the last general meeting have been disposed of by Mr. S. Davenport, the company's agent in the colony (as stated above), at an average of nearly 3l. per acre.

**LAND AT PORT AUGUSTA.**—The company's half-acre section, with frontage to deep water, is not yet sold, no offer sufficiently good, in the opinion of the directors, having been made for it. The important discoveries in the North being likely to increase the value greatly, the directors do not think it desirable to press the sale at present.

Stores have been and are being realised as opportunities occur, and the company's agent is making sales with as little delay as is consistent with securing reasonable prices.

Two of your directors, Mr. George Palmer and Mr. James Anderson, retire by rotation, and, being eligible for re-election, have offered themselves accordingly.

The statement of accounts, from June 15, 1860, to June 15, 1861, showed—  
Balance at bankers' ..... £287 3 9  
Petty cash in hand last year ..... 8 4 9 = £295 7 8  
Interest ..... 37 19 4  
Transfer fees ..... 4 15 0  
Remittances from S. Davenport ..... 1600 0 0 = £1907 19 4  
Office expenses ..... £498 5 4  
Deposit at bankers (in addition to £1000, last year) ..... 1000 0 0  
Balance at bankers this day ..... £395 15 3  
Petty cash ..... 13 18 9 = 409 14 0 = £1907 19 4

The CHAIRMAN said the above report contained all the facts which the board had to say before the proprietors, and that he would be most happy to answer any question, or give any information desired.

Mr. COXHEAD did not think the directors had advertised the company's property to a sufficient extent, at any rate, in this country. He understood the reserve price put upon the Tunglikillo estate by the directors was £5,000, and £5000, for the Charlton property. If that were the reserve price now, the property must continue to fructify, as it had been fructifying up to the present time, and must be accruing, and must be regarded as applicable as a return of assets or as a dividend; and after the adoption of the report he should be prepared to move a resolution to that effect, fixing the amount at 3s. per share, and to be declared upon all shares in the company upon which had been paid the calls up to 7l. 7s. 6d. per share.

A DIRECTOR, in answer to a question, stated that besides the shares upon which 7l. 7s. 6d. had been paid, there were 1000 free shares, which latter, according to the original agreement, were free from any call. The existence of those free shares was a serious and effectual bar to such a distribution as that proposed by the hon. proprietor. There could be no doubt that the adoption of such a resolution would involve them in litigation. —Mr. COXHEAD agreed that it was contrary to law and equity that those parties who had not paid for their shares should participate in the division of the assets.

The CHAIRMAN said there were nearly 18,000 shares upon which payments had been made, and fully paid up, and there were 1000 free shares, upon which no payment had been made. Out of those 18,000 shares about 500 had been forfeited in consequence of the non-payment of calls; therefore, in point of fact, there were 17,500 shares entitled to distribution, but at the same time there remained a grave question relative to the owners of those free shares.

Mr. ANDERTON said the question of the free shares could not be disposed of in the way proposed by Mr. Coxhead, for under any circumstances notes must have been given that a division of the company's assets was about to be proposed. He would ask Mr. Coxhead in what way he would regard a proposition for the division of the assets of the company in which was engaged, merely upon a motion of a proprietor, without having given any previous notice? Upon the adoption of such a resolution, under such circumstances, any shareholder could go and at once obtain an injunction in Chancery to restrain the directors, and especially those who held the free shares. He would ask the proprietors whether it would be advisable to adopt a resolution which the directors had no power to carry into effect?

A SHAREHOLDER asked the solicitor whether the holders of the free shares, not having advanced any capital, were entitled to receive any of the assets? —Mr. H. MASTERMAN (the company's solicitor) said that himself and counsel also considered that there was great doubt as to the rights attaching to the free shares.

Mr. ANDERTON considered it very impolitic to discuss that question in a public room, which could have no other effect than the arming of their opponents.

Mr. COXHEAD was astonished to hear that it was the opinion of Mr. Anderton that they could not at a general meeting of shareholders, at which was presented the balance-sheet, deal with the division or distribution of the assets.

Mr. TRENOW reminded the hon. proprietor that the usual course of procedure was for the directors to recommend a dividend.

Mr. MASTERMAN, at the request of a proprietor, read the clause in the deed relative to the free shares. It was to the effect that 1000 shares of the capital of the company, free from the payment of deposit or call, should be set apart to the discoverers of the mine, for their expenses and past services.

Mr. COXHEAD said that clause referred entirely to the company as a paying concern; but he contended the holders of those free shares could have no equitable right whatever to a proportion of the assets of a winding-up company.

Mr. MASTERMAN wished he could endorse the simple view taken by Mr. Coxhead.

The CHAIRMAN did not think it desirable to agitate the question further. He was sure all proprietors were anxious to honourably but equitably complete the bargain into which they had entered. If the holders of those free shares were entitled to anything, he was sure it would be the wish of the proprietors that they should receive it. At the present time there was a great doubt about the matter; the directors were extremely anxious to do that which was right, but, at the same time, they would not give one sixpence into the hands of those gentlemen who had not contributed to the struggle in working and developing those mines until all doubt had been dissipated. It had been said that the sale of their property had not been sufficiently advertised. In answer to which he might mention that it had several times been advertised in the *Mining Journal*, *Times*, and *Daily News*, in addition to which there had been a considerable sum expended in advertising in the colony. For his own part, he could not but regret, in common with some of the largest shareholders, that they had stopped the mine at the very point of deriving benefit. If they had gone down another 10 fathoms it was very likely they would now be receiving handsome dividends. With regard to the distribution of the funds in hand, there was great difficulty because of the question of free shares. To adopt the resolution of Mr. Coxhead he was afraid would involve litigation, but still any proposition from the shareholders would receive the best attention of the board, and they would do their utmost to carry out that which they considered best for the interest of the company. But it was impossible to determine at a moment's notice what was the best to be done. As to home expenses, they had been reduced to the lowest possible amount, and were now under £500 a year. As to the reserve price which had been put upon the property, that amount had been settled by a committee of the directors. It was a property that could not lose anything by not being sold, for every day it increased in value. Shareholders were probably aware that the Colonial Government had proposed a railway which would run through Tunglikillo to the bend of the Murray, which must increase the value of that property. The value of Charlton might be materially enhanced by the great discoveries of ore in the North.

The Hon. Mr. BAKER (a tenant of the company) stated that he had recently returned

from the colony, and was a holder of some of the free shares. He thought Tunglikillo would be depreciated in value by dividing it into small lots, or by allowing a road to be made through it; and he would suggest that the land be sold, reserving the minerals, which he believed would command a value hereafter. He was ready to give £20,000 for the property.

A DIRECTOR stated that the board had already received a very much better offer than that made by Mr. Baker, from a party willing either to purchase or lease Tunglikillo. The report and accounts having been received, a proposition was made to the directors to take early measures for returning some of the assets to the shareholders. It was also suggested that the property should be let at fixed rentals, and the minerals at a certain royalty. —A lengthened discussion ensued as to the price at which the Tunglikillo estate should be sold, a proposition being made to authorise the directors to dispose of it for the sum of £20,000. Subsequently it was agreed that the whole matter should be left in the hands of the directors.

A vote of thanks to the Chairman and directors was passed, when the proceedings terminated.

### THE SOUTH EUROPE MINING COMPANY.

At the general meeting of shareholders, held at the company's office, New Bridge-street, Blackfriars, on Tuesday, a report was read, of which the following are extracts:—During the past year the chief attention of your directors has been devoted to the development of the Bailton Mine, and they have now much pleasure in stating that in the month of August last a portion of the mass of ore was taken out in an upper level, about 20 yards above the deep adit and 60 yards eastward of the main shaft. This discovery necessitated the payment of the remaining portion of the purchase-money for this property: this has accordingly been made, and the whole of the company's mines are now free from any pecuniary claim respecting their purchase. On investigating this discovery of ore it was soon obvious that it could only be the upper portion, if not the extreme top, of the eastern end of the mass, and that the main deposit must be some distance to the north of the main adit. It was, therefore, determined not to attempt extractions of ore from this upper level, but to continue the main adit westward, unite it with the main shaft, and to drive a cross-cut from the end north, so as to intersect the deposit at a depth of at least 20 yards. These works have been successfully carried out, and the mass of ore cut at about 30 yards north of the main shaft; a ladder-rope has also been completed in shaft 21, thus affording greatly increased facilities of access and ingress to the mine. To facilitate operations on the mass of ore reached by the cross-cut and deep adit a level was driven west and east on the run of the deposit, and the mass attacked at five different points, about 6 yards distant from each other. That portion of the mass towards the east was found much mixed with decomposed kilias, but that towards the west, or in the direction of the main mass of the deposit, was clean, compact, and of good quality. Samples of the ore obtained from four of the cutting levels, and best results for copper and silver, were as follows:—

From No. 1 cutting, or that furthest from the main mass 0.50 per cent. of copper, and 0.10 per cent. of silver, next to the above, towards the west, 0.75; from No. 3 cutting, still further to the west, 2.50 per cent.; from No. 4 cutting, or that nearest the main mass, 5.75 per cent.

From these results it was determined to confine extractions to the cutting No. 4, but in consequence of a reported improvement in the quality of the ore obtained in No. 3, and also from the 5th cutting, situated intermediate between Nos. 2 and 3, a considerable quantity of ore has been raised from these two spots, as well as from No. 4. According to the last accounts received from the mine, dated July 19, 1861, the centre cutting was in the mass of solid ore about 4 yards; No. 3, 9 yards; and No. 4, 10 yards. Two vessels, of 150 tons each, have been chartered to convey the ore to England, and about 150 tons of the mineral are now waiting shipment at the port of San Juan del Fuerte. From the results of this shipment your directors will be in a better position to determine the most advantageous and profitable method to be pursued in the future development of your property.

The balance-sheet and statement of receipts and expenditure for the past year, duly audited, has been forwarded to each shareholder, and is now submitted for approval and adoption. It will be perceived that this statement is made up to June 30, inclusive, and, consequently, so very short a time is thus allowed between the making up and submitting of the accounts that they must, of necessity, to a certain extent, be incomplete; but the present circumstances is a matter of slight moment, compared with what it will be when a complete and full statement of assets and liabilities must be obtained for the purposes of a dividend; your directors, therefore, propose and recommend that the accounts be made up to December 31, according to the Articles of Association of the company, which will afford ample but necessary time to get in all accounts and liabilities from Spain and elsewhere, prior to the ordinary meeting in the month of July.

### UNITED MEXICAN MINING ASSOCIATION.

The half-yearly general meeting of shareholders was held at the company's offices, Finsbury-circus, on Wednesday, —Mr. C. MORRIS in the chair.

Mr. W. M. BROWNIE (the secretary) read the notice convening the meeting, and the minutes of the special general meeting, held on Feb. 28 (which were confirmed), together with the report of the directors, of which the substance is an abstract:—

The directors have the satisfaction of being able to report a substantial improvement in the state and prospects of the company's affairs. The profit on the working of the mine of Jesus Maria & Co. amounted during 1860 to £37,024 28s., of which the company's proportion was £28,425 92s. Mr. Fitzherbert estimated that the profit of the mine and hacienda would have been upwards of £30,000 more but for the unsettled state of Mexico, and consequent rise in the prices of stores and materials. The profit on the quarter ending March was £57,184 55s., of which the company's proportion was £44,474 44s. In the last half-yearly report it was stated that they were driving on the Luz lode, and at that time there were three frentes being driven in that direction in good ore; since that time the number of frentes has increased to five, one above the other, and all of these have laid open ground producing ore of excellent quality and in great abundance. The vein is subject to fluctuation, but it is unusually large, being in one place more than 15 yards wide, and rendering cross-cutting necessary in order to discover the most productive parts. All the frentes or levels above alluded to are being pushed forward into whole ground, and much may be expected from their further progress. At 30 varas above these is a frente or level called San Andres, which will throw considerable light upon the upper ground, hitherto quite unexplored. In the mine of La Trinidad one frente only is being driven, and that in the direction of the rich mine in Jesus Maria. The mines of Cata, Secho, and Rayas are yielding no profit, but Secho looks encouraging. The hacienda of Dolores and Duran continue fully employed in the reduction of the Jesus Maria ores. Arrangements have been made for the employment of 18 arrastres in the hacienda of Casas Blancas for the reduction of Jesus Maria ores, this hacienda being very favourably situated for that purpose. The value of the tortas, rapas, and ores on hand on May 22 was £95,600, against £77,400 reported at last meeting. The necessary communications with Sir C. L. Wyke, the new Minister, and with Mr. Fitzherbert, respecting the Zacatecas indemnity, have been made; upon this account there remained due from the Mexican Government £43,504, balance of the original sum, and £17,014 interest to Jan. 31, inst. The Mexican Government has agreed to pay the company a sum of £16,725 62s. A remittance of £13121, having been received from Mexico, the directors have given notice of the payment on Aug. 6 of the interest due on the new loan raised in 1854; and they have further the pleasure of announcing the payment on Sept. 13 next of 40 per cent. of the principal of the said loan. The London audited account shows:—

Balance last audit ..... £303 15 3  
Bill of exchange from Mexico ..... 1000 0 0  
Rent, taxes, and transfer fees ..... 112 10 0 = £1416 5 3  
Paid for and charged to manager in Mexico ..... 1 14 6  
London expenses ..... 338 5 10  
Insurance, law charges, and discount ..... 136 8 1  
Interest on new loan, and dividends unclaimed ..... 436 4 4 = £912 12 9

Leaving credit balance ..... £503 12 6

To this £503. 12s. 6d. must be added £9121. 0s. 5d., the nett proceeds of remittance since received from Mexico, making £9615. 12s. 11d. Out of this sum £377. 2s. 3d. has been paid upon interest and dividend account, and for directors' fees, and there are liabilities chargeable upon it of interest on new loan, £2500. 17s. 7d.; and percentage of new loan repayable on Sept. 13 next, £6711. 5s. 7d.; leaving a surplus of £1926. 5s. 1d. But at the same time the directors have to report that the company is liable to the amount of £5071. 10s. 11d. on account of the interest on the new loan, and a surplus of £1926. 5s. 1d., there is really a balance against the association of £3545. 5s. 10d.

The directors going out of office by rotation are Messrs. Chas. Morris and John Weston. The directors with regret announce the death of their late and esteemed colleague, Mr. Joseph Tasker. The vacancy so caused will have to be filled up by the meeting. Candidates for the vacant seat are Messrs. William Adam and Benjamin Oliveira. The auditor going out of office by rotation is Mr. John Hibbert.

The CHAIRMAN said that, as they had heard the report read, he thought there remained very little for him to say; in fact, he did not know that he could add anything to what was stated in the report, except by way of congratulating them upon the present very prosperous state of the mine, as compared with the condition of the property at the date of the last July meeting. He might refer to the profits during the past few years in support of his remarks upon their favourable position: in 1858 their profits amounted to £12,321; in 1859 to £17,300; and in 1860, as they heard from the report, to £37,000, in addition to which Mr. Fitzherbert told them they would have had another £30,000 had it not been for the unsettled state of political affairs in Mexico. In the quarter ending March, however, their profits had amounted to £57,000 (even assuming that they had realised the whole of the amount which Mr. Fitzherbert had estimated they might have done), was nearly equal to the entire profits of last year. With respect to the profits to the end of June they were not yet able to state what they were, but he saw no reason to anticipate a decline; and they had still something in reserve—they had the level of San Andres, so favourably reported upon, and to which too much importance could not be attached. Looking at the whole of the property, he felt that he might fairly congratulate them upon the very prosperous condition, and he sincerely wished that he could say the same for the country of Mexico. Unfortunately, however, that country was still in a state of anarchy, and unfortunately too, as long as that continued they must remain always in fear. Yet it seemed that they had little to hope for in the way of improvement until foreign powers resolved upon intervening to prevent a state of things that resulted not alone in anarchy, but which must ultimately prove a complete desolation of the country. He might inform them that, owing to the unhappy state of affairs which he had been describing, they had no accounts by the last packet. He was not aware that there was any other point to which he would refer, and would, therefore, move that the report be received and adopted, which he would be happy to answer any enquiry the shareholders might have to make.

A SHAREHOLDER would be glad to learn what had been done on behalf of the company in relation to the representation to Sir C. L. Wyke, the new British Minister, of the claims of the company upon the Mexican Government? —The CHAIRMAN said that he had addressed a letter to Sir C. L. Wyke, in which he gave him as clearly and concisely as he was able the facts of the case; he (Mr. Morris) did not consider that the letter required any answer, and no reply had been made to it.

Mr. HOLLOWAY supposed that the reason of the market price of shares being so low was a matter which could only be accounted for by the members of the Stock Exchange; although it was probably attributable, as the Chairman had remarked, to the unsatisfactory state of the country. It was in 1857 that the last payment was made by the Mexican Government. From a rough calculation, he estimated that the Zacatecas claim then amounted to £62,000, so that at present it would be about £68,000; then they had a tax of 1 per cent. upon their capital three times in 14 months—indeed, their total claim against the Mexican Government would amount, he thought, to about £68,000. He did not doubt that the directors had done all they could in the interest of the company, but he thought that it might be well to follow in the trail of the Mexican bondholders, by sending a deputation to the Foreign Secretary, and from the courteous way in which the bondholders' deputation had been received, he saw no reason to apprehend that anything but good would result from the appointment of a deputation by the present meeting of two directors and two shareholders to wait on the Foreign Secretary. He was, however, so confident in the exertions of the directors, that he would not press his motion if they considered it undesirable.

The CHAIRMAN thought it would be preferable to leave the matter in the hands of the board. He scarcely thought that the deputation was necessary, inasmuch as everything had been already represented as strongly as it could be. At times, however, they had

thought of such a course, and if the matter were left in the hands of the directors the proprietors might depend upon them doing their best for their interests. Lastly, they must remember, the Mexican Government had not paid anyone, so that they could not fairly complain of being in a worse position than others connected with the country.

Mr. HOLLOWAY thought that a great cause for active measures was the apparent want of principle on the part of the Mexican Government. They would not even grant them a drawback upon the silver exported, and he confidently believed that if they had the means they would not pay.

The CHAIRMAN thought that the Foreign Secretary had done all in his power, and he (the Chairman) would certainly like to know the contents of their next advice, at least, before they resolved upon any such deputation as that proposed.

The SECRETARY read a letter from Mexico, dated April 6 last, which the Chairman remarked would show there had been no neglect on the part of the company.

Mr. GODDARD reminded the meeting that patient creditors were too frequently forgotten, and, so far as he understood, all that Mr. Romney required was that the United Mexican Association should be in the position of clamorous creditors, in the hope of thereby obtaining their rights.

Mr. WILLIAMSON (a director) said that the San Acasilo claim was, no doubt, of importance, but he did not regard it as the principal thing. The pacification of the country was the event for which they had to hope. The mines themselves were now in a position that left nothing more to be desired. At the time of the last report everything was looking prosperous. But what they wanted was to see the country in a settled state, as money would then be more abundant, and everything would be better.

Mr. SOWELL recollected that Mr. Fitzherbert had written much about the increased expenditure, and would be glad to learn whether the improvement that had taken place had caused any diminution? —Mr. PHILLIPS (a director) said that no particular reduction was noticed in the accounts received except in the price of quicksilver. He did not see how any material change could be expected while Mexico remained in its present unsettled state.

The report was then unanimously adopted. Messrs. Morris and Weston were re-elected directors, and Mr. Adams was elected director in the room of Mr. Tasker, deceased. Mr. Hibbert was re-elected auditor, and thanks to the Chairman terminated the proceedings.

### WEST CARADON MINING COMPANY.

A bi-monthly meeting of shareholders was held at the company's offices, Adam's-court, Old Broad-street, on Wednesday, —Mr. A. HARRIS in the chair.

Mr. DUNFORD (the secretary) read the notice convening the meeting, and the statement of accounts, from which the following is condensed:—

Balance last audit ..... £6420 4 5  
Ores sold ..... 5715 10 9  
Carriage ..... 153 9 4  
Materials, interest, &c. .... 90 3 9 = £12,379 8 3

Labour cost ..... £2942 10 11  
Merchants' bills ..... 1026 6 10  
Lord's dues ..... 269 14 6  
May dividend ..... 3048 0 0 = 6,386 12 3

Leaving credit balance ..... £ 5,992 16 0

The profit on the two months' working was £6201. 11s. 7d.

The report of Mr. F. Pryor (the manager), and Capt. John, Trathen, and Williams, was read. —Mr. PRYOR then said he should be glad to answer any question, or offer any explanation respecting the mine or his report.

A SHAREHOLDER: What reserves have you? —Mr. PRYOR: Do you mean supposing the mine was this day to be abandoned?

A SHAREHOLDER: Yes. —Mr. PRYOR: Ore for sale, broken underground, and not credited in this account, not less than 20,000.

Another SHAREHOLDER said there was a great drop in the price of shares; what was the reason of that? —Mr. PRYOR said that was a question which did not come within his province. It might be partially due to the fact that the mine was not one of the class of trade generally, owing to the disturbance in America, &c. This was the excuse made generally in mines when a falling off takes place, but there was something more than this—the mine was not looking so well. He (Mr. Pryor) met the shareholders at a time when the mine was much poorer than when he inspected it on Monday—that was when he took it, and he had the pleasure of meeting them during that period, being two years and nine months, with profits realised £40,000. Some say the ore has been taken away too fast; no doubt this was applicable in many instances, but as he was confident it could never have been taken away at less expense, and without impeding any twofold operations, as well as having a good standard, he would say take it away; at least that was his principle, and he shall adhere to it.

A SHAREHOLDER enquired if there was much more ground to explore? —Mr. PRYOR said do you mean east or west, or any particular part of the set? In the eastern part a great portion of our ends on some of the lodes have been close to the boundary for many years, but there is much more ground unexplored than there has been taken away, and quite as great chances of success as when I took the mine. Of course, this is only an opinion, and it remains to be proved. He could only add, if it is in the set he would have it, as he had commenced, and should continue, to cross-cut at various points from the north boundary to the south. He was glad to tell the meeting when they were rich, which had been borne out by profits made, and did not hesitate to tell them when they were not. Notwithstanding the large dividends they have paid, they have still a good balance in hand, and everything charged up, such as new boilers, &c. He hoped before another meeting to have the pleasure of reporting some discoveries. (Hear, hear.)

The CHAIRMAN, in moving the adoption of the accounts and report, said that the committee had thought it better to propose a dividend at the rate of 1l. 10s. per share. The two months' working showed a profit of £6201. 11s. 7d.; after payment, therefore, of that dividend there would be a balance in hand of such profit of 841. 11s. 7d.

A SHAREHOLDER enquired what prospect there was, supposing the dividend declared as proposed, of its being continued? —The CHAIRMAN said that the committee considered that the legitimate profit made ought to be divided; they, for their own sake, would see that there were ample reserves kept in hand.

The accounts and reports were unanimously adopted, and a dividend of 1l. 10s. per share declared.

Mr. E. COOKE wished to know, not having heard the report read, how the bottom levels were looking? —Mr. F. PRYOR stated that they were looking better on the new lode than for some time past, that was in the 104 and 116.

On the motion of Mr. JAMES, a unanimous vote of thanks to the Chairman, committee, and manager was passed.

### GREAT WHEAL ALFRED MINING COMPANY.

A general meeting of proprietors was held at the London Tavern, on Tuesday, Dr. A. BEATTIE in the chair.

Mr. D. COHEN (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed.

The statement of accounts showed a loss upon the three months' working, ending July, of £1120. 7s. 11d., and a balance of liabilities over assets of £7701. 17s. 1d.

The report of the agents stated that from the depressed state of the copper and tin standard they have sustained a loss of several hundred pounds on the sales of copper ore and tinflint. In addition to the loss on the sales, they had a new coupling for the main-rods, 80l., and centre end for the capstan-whim, 40l.; these are extras. In consequence of the drop in the tin and copper standard, the reserves are not so much in value now as last quarter; they calculate that to be worth 11,000l.

The CHAIRMAN said that Capt. Trelease had been requested to inspect the mine, and the report which he had made recommended certain operations—the driving of the 142 east—which were at variance with the recommendations of their agents. Now, all operations which had been carried on eastward had proved unprofitable, and certainly adverse to the interest of the shareholders, and Capt. Trelease had previously inspected the mine on behalf of some of the lords, and it might be that the interest of the shareholders was considerably at variance with that of the lords.

Mr. NICHOLSON suggested that the report of Capt. Trelease should be read, although the committee did not purpose adopting the recommendations it contained.

The SECRETARY read the report referred to, the chief point of which was the recommendation that the 142 east should be driven. He estimated the value of the ground opened at 11,000l. He considered that proper attention had not been paid to the eastern ground for some time past.

Mr. J. HOLLOWAY thought it was proper he should explain the reason he had engaged Capt. Trelease to make what might be called an extraordinary inspection of the mine. For some little time past he, as an acting member of the committee, had been convinced that either the stopes had been over-worked, or that there was too much charged in the cost-sheets for stoping; and he was also very anxious to obtain an independent practical opinion with respect to the advisability or otherwise of driving the 142 east; and there were two or three other points upon which he considered it desirable to obtain advice. Feeling assured there could be no better adviser than one who had been a long time intimately connected with the largest mines in the district, and one who had been for many years the manager of Alfred Consols, he (Mr. Holloway) considered he was studying the best interest of the shareholders in selecting Capt. Trelease, especially as he enjoyed the confidence of the shareholders residing in the neighbourhood of the mine. During the last week, when in town, he had had a most anxious consultation with the secretary upon the subject, who, having investigated the last cost-sheet, cordially concurred in the policy of adopting the course proposed, which opinion was subsequently endorsed by other members of the committee. The objection which had been urged against Captain Trelease's report was that he had previously been employed by some of the lords to make an examination of the eastern part of the mine, and that, therefore, it had been supposed that he had been somewhat biased in his favour in opposition to the interest of the shareholders. But, as far as he (Mr. Holloway) was concerned, he fully concurred in the recommendation of Capt. Trelease, although in one or two points they were materially opposed to the views of their own agent. In the present state of the mine, however, it was accurate while to further refer to the subject, as the necessity for acting upon it would, in all probability, be obviated.

Mr. MILFORD said upon the last occasion they met together he had fully concurred in the views expounded by Mr. Holloway, trusting implicitly to his position and practical experience; but he (Mr. Milford) was sorry to say those views



accounts passed and allowed.—A call of 3s. per share was made, and the committee were re-elected.—It was then resolved that a special general meeting of the proprietors be held on August 20, to take into consideration the expediency of stopping the mine, and disposing of the machinery and materials.—The proceedings terminated with a vote of thanks to the Chairman and committee.

### SOUTH CARADON WHEEL HOOPER MINING COMPANY.

An ordinary meeting of shareholders was held at the company offices, George-yard, Lombard-street, on Tuesday.—Mr. THORNTON was in the chair.

Mr. J. WATSON (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. The accounts showed:—

Balance last audit ..... £154 4 3

April mine cost ..... 164 12 1

May ditto ..... 167 4 9

June ditto ..... 148 7 6

Hawke and Co., on account ..... 100 0 0

Chubb and Co's account ..... 62 15 5

Sundries ..... 1 14 0 = £788 18 0

Calls received ..... 703 17 8

Leaving debit balance ..... £ 85 0 4

The balance of liabilities over assets was 586l. 8s. 1d.

The report of the agent, Capt. W. C. Cock, was then read:—

July 27.—Since the meeting in April the engine-shaft has been sunk 4 fms. 3 ft. 7 in. to the ground for the last two months has been improving for progress; the present price is 25l. per fathom, being the lowest that has ever been given since the mine has been worked by the present company; this, I consider, speaks well for ultimate success; the lode for the last 9 fms. has taken a more vertical direction, which I also regard as a favourable indication. The 62 east has been driven 2 fms. 1 ft. 9 in.; the present end is in level, the lode in rather a disordered state, now suspended. The 62 west has been driven 4 fms. 1 ft. 7 in.; we have broken some very good work for copper ore from this end during the past month; the lode has been worked from 10l. to 12l. per fathom, but I regret to say that at the present time it is small, spotted with copper ore, but not to value. The granite about the lode is of a favourable description for copper ore, and I regard this change in the productiveness of the lode as being only temporary, and this little bunch of ore as being an offshoot of an important course of ore; the character of the ore only is sufficient to justify this opinion—in fact, there has never been anything equal to it found before, either in the present or former workings of the mine; the price of this end is 15l. per fathom. The 47 cross-cut north has been driven 6 fms.; no lode yet intersected, but from the quantity of water now flowing from the end, and the appearance of the ground, I am inclined to think that a lode will shortly be met with; the present price is 13l. per fathom. We commenced sinking a winze below the 47, on No. 7 lode, with a view of proving the ground between this and the 62, and also for affording better ventilation in the 62; sunk 7 ft.; the lode is small, containing some spots of copper ore; the price for sinking is 9l. 10s. per fathom. I consider the prospects of the mine much better than at any former period, and would recommend a continuation of the present plans of operation, believing that good results must follow.—W. C. Cock.

Mr. WILSON thought the specimens lying upon the table, containing so much yellow copper ore, were of such admitted excellence, and presented such a favourable element in their prospects, that they were justified in looking for better things.

Mr. COX remarked that the yellow copper ore presenting itself in such appreciable quantities had caused their property to assume quite a new and an important feature.

Capt. Cock stated that the ore was precisely similar to that from South Caradon. The captain of South Caradon had seen it, and regarded it as a very favourable indication. At the present time the shaft was about 87 fms. from surface. The specimens of ore referred to were taken from the lode about 20 fms. from the shaft, but there were chances of meeting the lode in the shaft. The lode in South Caradon made shallow.

Mr. COX enquired the difference in the character of the ground at the 60, and the cross-cut in the 62?—Capt. Cock replied that at the 62 there was a better description of ground for the production of copper ore than at the 47, and at the 90 it was much better than in the shaft at the 62.

Mr. BESTINCK, M.P., assumed they were now entering the granite.

Capt. Cock replied that such was the case, and that the mine had never produced such stuff as it was producing at the present time.

Mr. WILSON thought there was no reason to doubt that they would have a good mine. A SHAREHOLDER saw no reason why it should not prove equal to East Caradon, for two years since the prospects of that property were not equal to those of South Caradon Wheel Hooper.

Capt. Cock, in answer to a question, stated that they had about 120 fathoms run upon the lode before reaching the boundary.

Mr. COX did not remember the mine ever looked so encouraging as at present.

A SHAREHOLDER reminded the meeting that at the present time East Caradon was paying more for sinking the shaft than at South Caradon Wheel Hooper.

The CHAIRMAN having congratulated the shareholders upon the improved prospects which their property presented.

The report was received and adopted, and the accounts passed and allowed.

A call of 3s. per share was made, when the proceedings terminated with a vote of thanks to the Chairman.

### FOREIGN MINES.

#### ALDEN AND QUENAGEN MINES.—Estimated produce for June:—

Mines.	Ore.	Per cent.	Copper.
Quenagen .....	25	7	4,550
Raipas .....	60	1	1,000
Old Mine .....	145	4½	6,887
United Mines .....	8	5	4,000
Michell's .....	2	5	0,100
Thomas's .....	2	7	0,140

Total .....

13,077

QUENAGEN.—Lode E: There is no material alteration in Cole's shaft or the slope below the 25 to note. The lode varies from 2 to 4 ft. in width, yielding 3 tons of dredge work per fathom. The foot slope below the 10 looks rather better, the ore being more massive than for some time past; it yields about 2 tons of ore per fathom. In the deep adit east the lode is somewhat irregular, but is seldom without ore, and during the last month has turned out about ¼ ton per fm. In Saxe's shaft, below the shallow adit, the lode is 1 ft. wide, of a promising appearance, composed of good work throughout. The shallow adit east foot slope, east of shaft, still looks well, where the lode is 2 ft. wide, yielding from 4 to 5 tons of ore per fm. The cross-cut from the 10m. level slopes have reached the point where Wilson's lode should be found, but no signs of it are met with, and as we are in want of hands at surface we have deemed it best to suspend it for a time. Lode G continues equally large and regular, but the ore is again more desolated under the matrix. The weather is now fine for our surface operations, and every exertion is being made to push on the same, hoping it will lead to improve the returns.

RAIPAS.—We continue to raise some good quality work from the barytes lode, in the 10m. level workings; the lode ore is about 9 in. wide. In the 20m. level slope the barytes there is no change coming for remark since our last.

OLD MINE.—In the level south of the midway cross-cut the lode is about 15 in. wide, composed of quartz, calc-spar, and ore, the latter averages about ¼ ton per fm. In the north level we have commenced a winze to form a communication with the 10m. level. At this point the lode is principally composed of chlorite, with masses of ore irregularly intermixed, good saving work. The stratum here is much subject to slides, and will require careful timbering. The lode laid open here (about 5 fms. long), shows very favourable indications. The 10 south is improved, where the lode is 5 feet wide, worth 3 tons of good ore per fm. The quality of the work from the roof slope has latterly been poorer than usual, but it still yields 4 tons per fm., and we expect it will soon improve again. Bergmestor's slope shows increased quantities of calc-spar, and the lode looks rather better, and now turns out 3 tons of ore per fm. Our operations here and to the southward are much impeded by the foul air, smoke, &c., particularly in the roof, but the winze from the midway cross-cut will, when through, effectually ventilate all these parts, which we hope to accomplish in about two months from this date. No. 1 foot-slope yields about 3 tons of ore per fm. The workings south from Pederson's rise continue equally productive; the level yields 5 tons and the foot-slope 4 tons of ore per fathom. In the north slope the lode is 3 ft. wide, yielding 2½ tons of ore per fm.; the ground is rather hard. No change to note in the other parts of the mine.

UNITED MINES AND MICHELL'S.—The operations at these places have been on a limited scale of late, owing to a demand for men at other places, as mentioned in our former reports, and the returns are diminished in consequence thereof. At the latter place we have this week put some men to sink from surface on the south lode. Our object is to go down to an old working, about 5 fms. below, which would drain off all the water, and leave a great extent of promising shallow ground for exploring at an easy rate. There has been but little outlay incurred on this work at these concerns for a long time; but in order to keep up the tribute system we find it expedient to do so, and there are many points well worthy of trial.—C. TELEASE.

LAGUNAZO.—Paebla de Guzman, July 20: We have cleared the deep adit west, and again communicated to another shaft, and are now timbering the level, which has much fallen in, and a stream of water coming out about 20 ft. above the level from where we were working, which proves this water must be coming from the works in direction of the lake, and we expect there is a level driven north very near, as a large stream of water flows from this direction, and therefore, I believe it very probable we shall, when we cut the mass again by another cross-cut, drain down the water from the lake; there is now not the least doubt but that this is the main adit or ancient level towards the lake, which the moment the water is drained from to this level will leave a very considerable quantity of ore, which can then be worked by open workings over all the extent of the mass in the lake, as in sinking in the western extremity of the lake we have also cut the ore, and in the eastern extremity when we cut the ore by the borer in July, 1860. I have now laid open the mass for many metres in width, and continue to take off the refuse in order to ascertain the width of the mass in this part of the mine, which can now be ascertained very easily, as I have now all the mass in sight, above the level of the water, and therefore, we go on discovering its width by clearing off the refuse from the top of the mass. We have sunk in the ore where we cut it with the borer about 3 ft., and Mr. Rieken has assayed the ore, and found it to contain by wet assay 2½ per cent., but at this depth, so near the surface on the back of the mass, it cannot be expected to find ore of good percentage, and no other mine of this nature produces ore of better quality at this depth from surface; the mass in this place is very hard indeed, and there is no doubt will give an abundance of ore of the same quality as the other great mines of this neighbourhood have, and are doing, above the level of the adit, as at the great Tharmin Mine they are working entirely above the level of the adit, which is even shallower than ours, and at St. Domingo also have taken out very large quantities, and do not find the ore increase in quality going deeper; therefore, being now certain that there is a very large extensive mass of ore for such a considerable length, and all the width of the lake, and at least 46 ft. of ore in depth above the deep adit, it is now of the greatest importance to commence clearing out at once all the refuse from the lake, and lay the back of the mass all exposed, and in the meantime push on the deep adit with all speed possible in order to cut down the water from the old workings, where I am led to believe, large quantities of ore can be extracted, and after this is completed, then with a steam-engine a shaft can be sunk for another level, 20 metres or more, which would discover ore enough for a great many years to come, and there is now no question that the mine is at present in a speculation; by laying out a certain amount of capital a certainty of giving good results, as I have now opened works so that the mass is to be seen all the extension of the mine. Mr. Rieken has been on the mine, and has expressed himself highly pleased with what has been done, and agreed with the plan I have proposed for the future working, and also desired me to continue driving across the mass to the north of the kilns in the deep adit, where he found ore of 6 per cent. produce; and my next I hope to be able to give you information more certainly respecting this, as the mass being very hard, and until the works are properly laid out, we cannot advance so

fast as we would. In my next I will fill up the plan, which will give the board a clear idea of the importance and greatness of the mass of ore already discovered, and only if the outlay are wanted, as I have always from the commencement said the completion of the deep adit would make this one of the most valuable mines in the country.—T. ROSKOW.

LINARES.—July 20: West of Engine-Shaft, South Lode: The 95, west of engine-shaft, is worth ¼ ton per fm.; lode very small at present. The last 3 varas in the 85 have been driven on the cross-course. The 61, east of Warner's shaft, is worth 1 ton per fm.; lode chiefly composed of quartz and lead ore. The 61, west of Warner's shaft, is worth 1 ton per fathom; lode declining in value, but letting down a considerable quantity of water. The lode in the 51, west of Montes' winze, is very small, and the ground hard for driving. The 41, west of Julian's winze, is worth ¼ ton of ore per fm.; lode open and kindly, producing good lumps of lead.—East of Engine-Shaft: The 80, east of engine-shaft, is worth 1½ ton per fm.; lode still very large, and of a most promising appearance. The 85, east of Hameiro's winze, is worth ¾ ton per fm. The 75, east of Garibaldi's winze, is worth 3 tons per fm.; lode very large, chiefly composed of carbonate of lime, quartz, and lead ore. The 75, west of Taylor's cross-cut, is worth 2½ tons per fm.; lode similar to the one last named. The 75, east of Taylor's cross-cut, is worth 3 tons per fm.; this end is communicated with Davies' winze, and is opening splendid tribute ground. The cross-cut driving south in the 85 is getting into very hard, close grained granite.—North Lode: The 75, east of Ordones' winze, is worth 2 tons per fm.; lode 5 ft. wide, and leads through. The 65, east of Damas's winze, has declined in value very much of late. The 65, east of Gili's winze, is worth ½ ton per fm.; lode very wide, composed of gossan, and lead.—Shafts: The 41, west of Saxon's winze, is going down on the south part of the lode; after holding it we shall open the north side. Davies' winze is worth 3 tons per fm.; this very productive winze is holed to the 75 m. level. Seguro's winze is worth ¼ ton per fm. La Suerte winze is worth 1 ton per fm. San Eduardo winze is worth ¼ ton per fm.; the lode is very large, spotted with lead throughout. La Calle winze is worth 1 ton per fm.; lode small, compact, and very regular. San Francisco shaft is worth 1 ton per fathom.

FORTUNA.—July 20: Canada Incoosa.—West of Taylor's Engine-shaft: The 7th level, west of Gomez' winze, is worth 1½ ton per fm.; the lode is large, and looking very kindly indeed. The 6th level, west of O'Shea's shaft, is worth 1½ ton per fathom; lode rich and compact. The ground in the 5th level, west of Fernandez' winze, contains lead. We are pushing on the 4th level, east of Henry's shaft, to meet the one last named. The 4th level, west of Rendon's winze, is worth 1½ ton per fm.; lode looking very kindly. We have opened the south part of the 3d level, west of Judd's shaft, where the lode is large and open.—East of Taylor's Engine-shaft: The 4th level, east of Lowndes' shaft, is worth ¼ ton per fathom. The 4th level, west of ditto, is worth 1½ ton per fm.; this end is holed to Donaghy's winze. The 3d level, east of Carro's shaft, is worth 2 tons per fm. The ground in the 2d level, east of Bartolome's winze, is hard for driving; lode unproductive. Canton's sump-winze is worth 1 ton per fm.; ground still very wet.—Los Salidos Mine: The 5th level, east of Antonio's winze, is worth ¼ ton per fm. The elvan course in the 5th level, west of engine-shaft, is hard for driving through. The 4th level, west of Hernandez' winze, is worth 2 tons per fm. The 4th level, west of Colagan's shaft, is worth 1½ ton per fm.; lode very regular and kindly. The 3d level, east of San Pablo's shaft, is worth 1½ ton per fm. The 3d level, west of Eugenio's winze, is opened to Buenos Amigo's shaft, and will shortly get under the old workings in the 2d level. The 2d level, east of San Miguel shaft, is worth ¼ ton per fm.; the lode is small and disarranged at this point. The lode in the 1st level, east of San Miguel shaft, is divided into two small branches. We are making good progress in clearing the 2d level, west of Buenos Amigo's shaft.—Shafts and Winzes: Morris's engine-shaft is worth 2 tons per fathom. San Pablo's shaft is worth 1 ton per fm.; the ground is very hard for sinking. Buenos Amigo's shaft is holed to the 3d level, and has completely ventilated this part of the mine. San Gabriel shaft, being off the lode, is rather hard for sinking. Fernandez' winze will be holed to the 5th level in the course of a few days. Munoz' winze is worth 1½ ton per fathom. Ojalila's winze is worth 1 ton per fathom; the lode is small and regular, and will, no doubt, continue so to the next level.

LUSITANIAN.—July 25: Palhal Mine: The ground in the 40 cross-cut, south of oak shaft, is rather harder than it has been. The ground in the 30 cross-cut, south of this shaft, is also hard.—Levels on Basto's Lode, East and West of Taylor's Shaft: The lode in the 61 west has not been taken down, nor can it be until we have drawn away the stuff that is broken with the whim. We began to draw here on the night of the 23d inst. The lode in the 60 east is 6 ft. wide, worth 2 tons per fathom. The lode in the 50 east is 2 feet wide, composed of quartz and stones of ore. The lode in the 40 east is 2 feet wide, worth 1½ ton per fm. The lode in the 38 west is 2½ ft. wide, having a branch of ore in it worth 1 ton per fm. The lode in the 38, east of River shaft, is 2 feet wide, producing good stones of ore. The lode in the 50, east of River shaft, is 3 feet wide, composed of quartz and stones of ore. The lode in the 38 east is 1 foot wide, composed of flokan. The lode in the 28, east of River shaft, is 3 feet wide, composed of quartz, with spots of copper ore. The lode in the 18, east of same shaft, is 3 feet wide, composed of quartz and spots of lead. The lode in the adit, east of Pinto's shaft, is 1 foot wide, composed of schist and spots of lead. The lode in the adit, west of Perez' whim-shaft, is 1½ foot wide, producing 1½ ton per fathom. The lode in Jackson's winze, below the 38 fathom level, west of Taylor's shaft, is 2 feet wide, worth 1 ton per fathom. The lode in the 30, west of the 38, is 1 foot wide, composed of schist. The lode in the 50, west of Ernest's winze, is worth 2 tons per fm. The lode in the slopes No. 2, in the back of the 38, west of mark, west of Clondino's winze, is worth 1 ton per fm. The lode in the slopes No. 3, in the back of the 50, east of Taylor's shaft, is worth 1 ton per fathom. The lode in the slopes No. 5, in the back of the 38, east of Clondino's winze, is worth 1 ton per fathom. The lode in the slopes No. 4, in the bottom of the 28, west of Clondino's winze, is worth 1 ton per fm. The lode in the slopes No. 7, in the back of the 50, west of Taylor's shaft, is worth 1½ ton per fm. The lode in the slopes No. 8, in the back of the 28, east of Aguider's rise, is worth 1 ton per fm. The lode in the slopes No. 9, in the back of the 50, west of Taylor's shaft, is worth 1 ton per fm. The lode in the 50, east of River shaft, is 1 foot wide, composed of schist. The lode in the 50, west of River shaft, is 1 foot wide, worth 1 ton of good ore per fm. The lode in the rise above the 38, west of the caunter lode, is worth ¾ ton per fm. The 28, east of the Slide lode, is again resumed, where the lode is 15 in. wide, and unproductive. Joao's winze, below the 18, is holed through to the 28, and the men removed to try to sink Abel's winze below the adit east of Perez' whim-shaft. The lode in the 28, east of Junction winze, is 6 inches wide, producing stones of ore. The lode in the slopes No. 11, in the back of the 18, east of Dea's winze, is worth ¼ ton per fm. The lode in the slopes No. 12, in the back of the 38, west of the caunter lode, is worth 1 ton per fm.—Caunter Lode: The lode in the 50, west of Taylor's shaft, is 1 foot wide, and unproductive.—Great Caunter Lode: The lode in the 28, west of Oak shaft, is 2 ft. wide, spotted with lead. The lode in the slopes No. 13, in the back of the 20, west of Oak shaft, is worth 1½ ton per fm. of lead and copper ore mixed.—Ponts Lode: The lode in Laurence's winze, below the adit, west of the River Calma, is 9 in. wide, producing rich stones of copper ore.—Slide Lode: The lode in the rise above the 28, against Abel's winze, is 3 feet wide, and unproductive.—House Lode: The lode in the 20, west of the Slide lode, west of Oak shaft, is 8 inches wide, and poor.—Carvalho Mine: The lode in the adit, west of the River Calma, is 2 feet wide, composed of quartz and muddle. The lode in the 10, west of Henrique's winze, is 1 ft. wide, composed of quartz, spotted with lead. The lode in the 10, west of the 10, is 1 foot wide, producing stones of lead.

CLARENDON CONSOLS.—J. Martin, July 4: Stamford Hill Mine: We have cut the ground at the 10m. level, in the north side, and for wheelbarrow-way, and have commenced the cross-cut to cut the north lode at this level; the ground is rather hard; the engine appears to draw and pump the water from this level well. The north lode in the 82, west of shaft, is 4 ft. wide, and composed of red clay, with prisms, and at times stones of yellow copper ore; on the whole kindly. In the rise in back of this level the lode is 3 ft. wide, and worth ¾ ton of ore per fm. We have risen about 3 fms. from the back of the level, and have left stopping ground in each end of the rise for the whole of that distance. I am almost certain that this lode has been seen at the 70 m. level; the rise we are now putting up will soon tell. The lode in the 70, west of shaft, is 3 ft. wide, consisting of light kilas, prisms, muddle, and sometimes veins of bitumens; this lode is very much improved—now it yields 4 tons per fm. per fathom the men having to lift their own stuff. In the 46, south-west on the 70m. level, the lode is 5 ft. wide, and composed of gossan, prisms, and green carbonate, black oxides, and yellow copper ore, and letting out water freely; a prettier-looking lode than this no man would wish to see. I broke from this last yesterday a hat-cap of as rich ore as has ever been broken in Stamford Hill Mine. We have two men driving a shallow level at Gold Mine, where we broke the gossan, but the lode is poor at present. I shall stop this until the board has seen the gossan; if they think well to go and take up a deeper level this can then be done. The engine and pumps are working well, and the English and natives are pushing on comfortably together. I now give you a statement of the work done at present:—This morning, 4th inst., we have driven 10 ft. to the wharf as soon as the road is put right (say, 9 or 10 days from date); stuff at surface, undressed and in course of dressing, 50 tons at 12 per cent., which will give 6 tons of ore when dressed: total, 15 tons at surface at this time.

July 8.—Since writing the above we have another lode cut in at the 46, driving south-west; it is about 18 in. wide, and composed of green carbonate and black oxides of copper; the whole width of the lode in the end at this time about 5 ft.; the ground is good—set at 40s. per fm., a kindly-looking lode; the lode is sprinkled with black oxides, green carbonates, and small veins of yellow ore, but as we have so much water coming from the end, the green and black oxides soon disappear, as you know you cannot stand water in the mine, and are saving the yellow ore, but the black is the richer. The deeper level will tell more about this lode. The weather is getting better, and we are taking down the dressed ore to Provot's. I must say I never had a better opinion of the lode in Stamford Hill than I have at present, from the change we have seen both in the character of the lode as well as the stratum about it.

ENGLISH AND CANADIAN.—Herbert Williams, Francis Bennetts, Jun., July 6: Morrison's adit is advanced east of Grass shaft, No. 2, 1 fm. 1 ft. 3 in., the ground being extremely hard, carrying a considerable quantity, as compared with the ground previously passed through in this driving. We have re-set this to drive for July by four men, at \$84 per fm., being increase on the price paid last month of \$4 per fm.—Adit Level South, on West Branch of Fremont's Lode: This branch of Fremont's lode was passed through in May, as per last monthly report, and we have now commenced driving on its course south from adit, which we have set for two men, for the month, at \$66 per fm.—Adit Level North on Sewell's Lode: The winze commenced in this level, as advised in last report, was sunk 2 fms. 1 ft. 9 in., the lode having still further increased in size and improved in value, it being now worth in sight about \$120 per fm. for copper ore. We have re-set this to continue sinking for July by six men, at \$112 per fm., being an increase on the price paid for last month of \$32 per fm.—Adit Level South on Sewell's Lode: The winze from bottom of this level was sunk 2 fms. 5 ft. 8 in., the lode having become larger and better defined, though not carrying any copper. We have accordingly re-set this to sink for July by two men, at \$90 per fm., being an increase on the price paid for last month of \$18 per fm.—Hail's Lode: We continued to keep four men working on this during the month, stripping down some branches on the sides, and stopping the north-west portion of the lode over the cross-cut, and obtained about \$375 worth of ore. We have still ore in sight here, which we shall continue to take away.—Kent's Shaft: This shaft was sunk during the month 3 fms. 0 ft. 6 in., the ground having improved a little for sinking. We expect this shaft will be down to the 30 about the middle of the month, when we shall at once put in the necessary soler over the cistern, and commence cross-cutting towards the lode.—Sleeper's Lode: We broke 5 fms. 1 ft. of ground on this surface stop, and obtained about \$75 worth of ore. The lode in the bottom, however, has become poor, and we have suspended it for the present.—Stewart's Lode: We broke in this surface stop 6 fms. 2 ft. 11 in. of ground, and obtained about \$60 worth of ore. The lode in bottom of this has also become poor, and we have accordingly suspended it for the present.—Shaw's Lode: We have commenced a surface stop on this lode on a promising branch of grey ore, which we have set to two men for the month, to stopes directed, at \$9 per fm.—Dressing: We have a considerable pile now ready waiting for the crusher, which we trust to re-start in about ten days. We shall also push on with the re-erection of the stamps with as little delay as possible. We trust to get the buildings again fairly under cover about the end of the month.—Roads: We have made considerable improvement in the road between the mines and the Craig-road during the past month. We have also chopped and cleared the 14th and 15th commission road along the company's property, a distance of two miles through the bush.

BOLIVAR MINING ASSOCIATION.—The payment of the closing dividend to the shareholders has been finally notified. The concern will cease to exist after Nov. 1.

### Mining Correspondence.

#### BRITISH MINES.

ABERDOVEY.—A. Ede: The driving of the cross-cut, in the 42 fm. level, from the engine-shaft, to intersect the main and south lodes, is being proceeded with vigorously. The stop in the back of the 32, on the main lode, and north of the winze, is without alteration since last report. The stopes in the same level, south of the winze, are producing 1 ton of ore per fathom. The stop in the 12 is without change. We have this week commenced the shipment of a parcel of ore.

ALFRED CONSOLS.—W. Uren, T. Hoeking, July 31: The main lode west of Davey's engine-shaft, in the 160, is 4 feet wide, spotted with ore; this lode in the 160, driving east of said shaft, is 4 feet wide, worth 5l. per fm.; this lode in the 140, driving east of the above shaft, is 3½ feet wide, producing stones of ore, but not to value. The north part of the main lode, driving east of Robert's stop, in this level, is rather disordered by a small cross branch; it is now 18 in. wide, worth 12l. per fm. The main lode in the 130, east of the above shaft, is 5 feet wide, worth 5l. per fm. We have resumed the driving of the 120 again, finding the branch referred to in our last will soon be met with there; where cut into it is 1 foot wide, producing stones of ore. No lode discovered in either of our cross-cuts, north or south, in the 140. Robert's stop, in the back of the 140, is worth 20l. per fm. Hoeking's stop is worth 12l. per fm.; Floyd's stop is worth 30l. per fm.

ASHBURNTON UNITED.—E. Harvey, Aug. 1: In consequence of the breaking of the engine-beam our underground operations have been seriously impeded for nearly four weeks, but we are happy to state that the mine is again in full work to the bottom, and the men resumed working their respective bargains and pitches. The new wheel and stamps will be erected and ready for working in about nine days. The late incessant rain has greatly assisted our stamping, which will enable us to send to market a good batch of tin in about three weeks. Every operation is being smartly pushed on.

BEDFORD CONSOLS.—Capt. Mitchell, Aug. 1: In the middle adit level the No. 1 south lode is about 10 in. wide, composed of strong muddle, peach, and occasional stones of black and yellow copper ore, with an increase of water coming from the end. Hail's pitch, in back of the 27, is not looking so well; I hope, however, that it will soon improve again. No other change to notice since last report.

BEDFORD UNITED.—J. Phillips, July 30: We have not taken down the lode in the 115 west; the same remark will apply to the lode in the winze sinking in this level. The lode in the 103 west is worth 2 to 3 tons per fm. Yandell's and Manuel's stopes, in the back of this level, are worth 4 and 3 tons per fm. Woolcock's stopes, in the back of the 90 west, are worth 2½ tons per fm. There is no alteration in the 88 east or 47 west. We weighed off at Morwellham on Friday the 26th inst., 203 tons 6 cwt., and sampled (computed) 204 tons.

BICKLEIGH FALE PHENIX.—J. Hambly, Aug. 1: The ground in the adit end continues much the same, only a little more water flowing, which we are not taking before this, I think, indicates our near approach to the lode, which I dare say we shall find will let out a great deal of water when cut, as lodes generally do, and the larger and better they are the more water they are likely to discharge; the men are working well, and the ground continues favourable.

BIRCH TOR AND VITIFER.—Capt. Symonds, July 27: Hambley's Shaft: In the 24 east no lode taken down since I wrote last. In the 24 west no lode taken down for the last 3 fathoms. I think we have intersected a cross-course in this level; I will let you know more about it before I close this letter. The pitches in this part of the mine are much as when last reported.—Lance's: The lode in the eastern part of this shaft is yielding some very good work, but in the western end of the shaft the lode is rather small at present, producing a little tin. In the deep adit east no lode taken down since last report. In the deep adit west the lode is 15 in. wide; a kindly lode. The men broke some good work this week; we have a change of ground in this end, which is much better for exploring.—Pitches: Browning's pitch not looking quite so well; all the others much the same as when last reported. The air-shaft is down about 14 fathoms, and we have not found the bottom.—Dunstan's: The water is down nearly 7 fathoms below the 10; we are forking very fast; it is a large pool to draw out with an 8-inch lift. I have been down at Hambley's since I wrote the above. There are still heads going across the end, but can scarcely tell what to call it. The ground is a decomposed granite, very soft. If this is the cross-course, they find in the old Birch Tor I am hoping that our lode will make a change for the better, as in Birch Tor they had most of their tin to the west of the cross-course. I have nothing more of importance to communicate at present.

BORRODALE.—W. Dixon, Aug. 1: The workings on waddy pipe, where we are rising above Charlton's stage, have a better appearance for black-lead this week, and we have obtained a few pounds of wad from there; also the workings on Rhoyd's stage are progressing favourably. We shall prove the waddy pipe in a short time in this level. The workings in the excavation of the grand pipe, where we have two men, has yielded a few pounds of best quality wad since my last. We are now in a position to make a short trial to the intersection of the main vein and Daniel's vein.

BOTTLE HILL.—J. Eddy, July 29: On Friday last was our setting-day; we then set eight pitches in different parts of the mine,—one pitch on Robert's lode, three men and one boy, at 13s. 4d. in 1l.; two pitches on Bianchini's, seven men, at 13s. 4d. in 1l.; on the main lode, four pitches, four men in each pitch, all at 13s. 4d. in 1l.; one pitch on the Bucking-house lode, at 13s. 4d. in 1l.—this in the bottom of the 12. I believe there is a good shoot of tin gone down in the bottom of this level, and I have no doubt it will continue down to the 24; in this level we have about 10 fms. to drive before we expect to get under the shoot of tin gone down in the bottom of the 12; four men have taken this end to drive, at 2l. 15s. per fm., and when they have done this lode holds down to the 24, as we now have it in the bottom of the 12, we shall then be able to take it away on the full tribute we are now giving. We have had a full supply of water for stamping and drawing for the last fortnight, before this very little was doing either in stamping or drawing, but at the same time the tributaries were breaking great quantities of tinstuff underground, and as I mentioned in my last, the owners' tinstuff was stamping with the higher machine stamps; now, since we have had water this wheel has been employed in drawing for the tributaries almost night and day to keep the other stamps at work; and when we are drawing there is no stamping. I hope soon to make a sampling for two or three parts of the tributaries tin that is now in course of stamping and dressing, after which I shall have two pairs of stamps, when I shall soon be able to return the owners' tin. The machinery is all working well.

BRONFLORE.—J. Laster, Aug. 1: No. 1 Lode: At the 13m. level cross-cut, from No. 4 lode, below adit, we are still driving through the No. 1 lode; so far it has proved 12 ft. wide, chiefly composed of carbonate of lime, and, contrary to expectations, this for the last 3 ft. carries several small branches of the silver-lead ore. This I consider highly satisfactory, for looking at the large deposit of carbonate of lead in the same lode about 30 fms. west of this point, and 23 fms. nearer surface, together with the character of the same lode where cut through in forming the new adit 13 fms. east, it is most encouraging to have in cross-cutting a lode of ore at this particular and intermediate point. It is the general opinion that the carbonate of lead discovered in this mine, and which still continues to fill every interstice of the lode upon which we are sinking and rising above, is the top or bloom of a large body of lead ore, and this, at this increased depth, we may soon prove; therefore, so soon as we gain the north wall we shall proceed to open a 40 m. level west, on the course of No. 1 lode, as by following these branches we may soon have a discovery of importance. Another trial may be easily and cheaply made at an intermediate point, by putting out a level west from new adit; this will be 27 fms. from surface, and I propose to put four men on so soon as the cross-cut is through the lode. The rise and winze in the same lode, from the 17, are each yielding good ore. Thompson's cross-cut, to reach the south lode, is progressing well, in favourable ground. The tribute bargains are without alteration.

BRYNABOR.—E. Williams, July 25: The ore is holding on still in



above. The lode in the 60, west of the engine-shaft, is without change since our last report. The lode in the 50, east of the engine-shaft, is yielding good stones of copper ore; this end is now coming into a new run of ore ground. The cross-cut at the 50, driving south, is progressing as fast as possible. We have drained the water to the 45, the sunpans are putting in ladder-ways, and dividing the shaft. Next week we intend commencing the cross-cut at the 45 south to cut the lode even in the 25 ft. level cross-cut. The lodes in the 25 south, east and west of the cross-cut, are looking very promising; the lodes in the 25 to 3 ft. wide, yielding some good black and yellow copper ore. The lode in the 25 east, on the north lode, is much the same as last reported. Our sampling on Tuesday last was computed to be 114 tons, of average quality.

**CLARA UNITED.**—J. Lester, Aug. 1: I have set the following bargains:—The winze to sink below the 20 by six men, 4 fms. or the month out, at 61. per fm. The 32 to drive east by four men, 3 fms. or the month, at 125. per fm. The 32 to drive west by four men, 4 fms. or the month, at 90. per fm.; each end is worth quite 1 ton of lead ore per fathom. These bargains include wheeling and tramming staff to shaft. I have dialled the mine all through and will send you a plan in a few days.

**COLLACOMBE.**—Samuel Mitchell, July 30: During the last month the 105 has been driven west of the eastern winze 8 fms. 1 ft., and the lode continues without alteration; 2 fms. 4 ft. have been stopped in back of this (the 105) level, and the lode worth 2 tons of copper ore per fm. The western winze has been sunk 3 fms. 2 ft.; the lode is 6 ft. wide, composed of capel, quartz, and copper ore; 9 fms. have been stopped in back of the 95, and the lode is worth 1 ton of copper ore per fathom. There is no alteration to notice in any other part of this mine.

**CROOKHAVEN.**—J. Thomas, July 29: The communication between the 40 and the 20 will be completed much sooner than I expected. The north cross-cut men are showing to meet the rise, and having taken the bearing of the ground I think they will hold in the course of the month; this does, no doubt, there will be a good ventilation for the future, and we shall be enabled to count on the full staff in sinking the engine-shaft; nothing shall be left undone in pushing down the shaft after the ventilation is accomplished. The south lode, driving west in the 40, has a most promising appearance, being mixed with yellow copper ore throughout the end, and I am glad to say it is showing stronger and better in the bottom of the end than in any other part. There is a large portion of the lode standing north on the part we are driving on, consequently when we get a few fathoms further west I intend cutting through the lode in order to ascertain its character and value. Western Trial Shaft: At the end of the working month I expect we shall be down about 10 fms.; the ground continues to be of the same mineralized character, which holds out the greatest probability of coming on a good mineral deposit in depth. This part of the mine is easy for exploration, and a great deal can be effected in a few months. We are getting on as fast as can be expected in sinking the engine-shaft, but the work is much retarded at present for want of air. The engine is working very steadily, and the shaftwork in good order, and I consider, on the whole, we are progressing satisfactorily, and I am fully persuaded by pursuing the present course we shall have a good and valuable mine.

**CROWLEY.**—J. Bosch, Aug. 1: The lode in the adit level, on south lode, is 3 ft. wide consisting of quartz, clay, and patches of gritstone, occasionally spotted with lead ore; it has a kindly appearance, and it is my opinion that it will soon lead to a deposit of lead ore.

**DEVON AND CORNWALL UNITED.**—T. Nelli, July 30: In the middle level cross-cut I believe we have just intersected the north wall of the lode, which so far as seen produces capel and stones of ore; size, &c., not yet ascertained. At William and Mary, in the 10, east of engine-shaft, the lode is looking more promising than for some time past. We are engaged about the line of rods, which shall go on with as fast as possible.

**DRAKE WALLS.**—T. Gregory, Aug. 1: In the 102, east of Matthew's shaft, and east of the cross-course, the branches are producing stones of tin, and more promising. In the 92 east the branches are producing tolerably good work for tin. The branches on the Tye level east are producing good work for tin, and opening profitable ground for stopes. The branches in the 80, west of Betley's shaft, are producing good stones of tin. In the 70, west of Brenton's shaft, the branches are producing saving work for tin, with a little copper ore. In the 60, west of Brenton's shaft, the branches are producing some good work for tin, and the ground has rather improved. The branches in the 50, west of Brenton's shaft, are worth 150. per fm. for tin. In the 40, west of Brenton's shaft, we have put out a cross-cut south, and have intersected some good branches of tin. It appears the 40 was not driven on the main tin branches, and we have no doubt of laying open some important tin ground at once about the 40. No time will be lost in carrying out this important work. No change to notice in any other part of the mine.

**DUCHY AND PERU.**—J. Ball, G. Phillips, July 30: At our setting-to-day the following pitwork bargains and tribute pitches were set:—Ball's engine-shaft to continue to sink under the 10, to the 19, or through the lode, by six men, at 71. 10s. per fm. The 10 to drive west from Ball's, by four men, at 25s. per fm. The 25, from surface, at Carter's shaft, to drive east and west, by six men, at 26s. per fm. The winze to sink under the adit, to hole to the 10, by two men, at 32s. 6d. per fm. The end to drive west at Peru, by four men, at 50s. per fm. The pitch in bottom of the adit, by six men, at 5s. 6d. per 21 cwts. for blende, &c. A new pitch for copper, No. 1 in back of the 10, by three men, at 2s. 6d. in 11. Also new pitch, No. 2, for copper, in back of the 10, to the west of No. 1, by three men, at 1s. 6d. in 11. At Carter's shaft, where we are driving at 26s. per fathom, we have a course of blende worth 10s. per fm., and which, when we open on the course of the lode, will set at from 4s. to 5s. per ton. We beg to congratulate the adventurers on their good prospects, as shown by the above setting report.

**EAST ALFRED CONSOLS.**—H. Skewes, August 1: The western end at the 70 fm. level, south lode, is driven 7 fms. west of cross-cut; lode at present disordered; ground harder than we expected. The eastern end is driven 8 fms. east of cross-cut; lode from 1 to 2 ft. wide, composed of spar, blende, and stones of copper ore. In the 50 fm. level the south lode, in the eastern end, is 1½ ft. wide, with a very kindly appearance, composed principally of spar with occasional stones of copper ore; this end presents a much better appearance than it has before. In the western end the lode is from 1 to 3 ft. wide, worth 2 tons of ore per fm. The 38 west, on the south lode, is also worth 2 tons of ore per fm. Other parts are looking much the same as when last reported on.

**EAST CARN BREA.**—T. Glanville, July 31: We have holed the rise at the western shaft, from the 30 to the 26, in which the lode is 2 ft. wide, and will produce 4 tons of ore per fm. We shall now commence to sink the shaft below the 30, to see the lode at a deeper point. In the 40 east the lode is producing 3 tons of ore per fm. In the 40 west the lode is yielding 2 tons of ore per fm. In the winze sinking below the 40, west of the cross-cut, the lode is yielding 3 tons of ore per fm. In the winze sinking below the 40, east of the cross-cut, the lode is yielding 1½ tons of ore per fm. Nothing new in the other parts of the mine.

**EAST DEVON GREAT CONSOLS.**—T. Richards, July 30: In the engine-shaft we have 2 fms. more to sink previous to commencing a 52 fm. level; the ground is very easy for progress, and highly congenial for mineral, producing more green oxide of copper than for some time past. In the 40 west the lode shows a little change, producing more prlan and muncie than before seen in the drive, and still contains a little copper ore; the ground is easy for driving, and water issuing from the lode freely. No change to notice in the cross-cut south.

**EAST FOWEY.**—M. Harbery, July 31: Our pay and setting-day being last Saturday, I set the following bargains:—The shaft to sink to nine men, 4 fms. or the month out, at 91. per fm., the company to pay for drawing and landing the stuff. The shaft is now down 15 fms. 1 ft. 2 in., and if the ground continues as favourable, with no further increase of water, I hope to reach the 20 by the end of August. The machinery was safely landed at Lostwithiel Quay, and some parts of it are now on the mine. It would be advisable to seek an engineer to superintend its erection, or to furnish me with drawings. Surface operations are proceeding favourably.

**EAST GUNNIS LAKE AND SOUTH BEDFORD.**—J. Phillips, Aug. 1: The 36 end east continues to look well, now worth 4 tons per fm. No. 3 winze, behind this end, is worth 3 tons per fm., with every appearance of further improvement. In No. 2 winze we have stopped the lode, and the ground is looking better; the ground is much the same in the 36 cross-cut south. No alteration in the 24 end east. The lode in the deep adit east is 2 ft. wide, composed of peach, spar, muncie, and rich stones of ore, a very promising lode. We are still sinking between the two lodes at Gard's shaft. We are through the capels in the cross-cut at the shallow adit east, and have every reason to believe that the main part of the lode is still further north.

**EAST ROSEWARNE.**—J. James, July 27: The ground in the 55 cross-cut is without change to notice; we expect to cut the lode shortly. In the 43 east the lode is about 9 in. wide, composed of quartz, muncie, and stones of copper ore. In the 43 west the lode is 1½ ft. wide, composed of quartz, muncie, and stones of copper ore. In the 43 west the lode is 1½ ft. wide, composed of quartz, muncie, and stones of copper ore. No change in the 22 cross-cut. King's shaft is about complete to the 22, on the north lode; we intend sinking this shaft with all possible speed, as the 43 west is closely approaching this point. No change to notice in any other of our operations.

**EAST TREFUNIS.**—John Pope, Aug. 1: In the 58, east of cross-cut, on Trelawny's lode, the lode is 2 feet wide, producing a little copper ore, but not enough to value. In the 34, east of cross-cut, on Trelawny's lode, the lode is 20 in. wide, composed of spar, peach, and spots of copper ore. In Trelawny's flat-roof shaft, sinking below the deep adit, the lode is 3 feet wide, and continues to yield good stones of copper ore, much the same in appearance as for some time past. The 22, west of the cross-course, on Smith's lode, the lode is 18 in. wide, composed of gossan and spar.

**EAST TREKERRY.**—John Nancarrow, July 29: It is with pleasure I announce an important improvement in this mine. In sinking the flat-roof shaft we have at a depth of 34 fathoms discovered a new lode, underlying south 18 inches in a fathom; it is already seen 15 inches wide, composed of copper, blende, quartz, prlan, and flookan; it has a rich appearance, and contains ore that will pay for working; the ground about it is very good, and I have not seen a lode more likely to be profitably productive. This really promises well for the copper lode to the north, towards which we shall drive at the 40. There is no change to notice in any other part of the mine since the meeting on the 23d.

**EAST WHEAL ELLEN.**—J. Morcom, July 31: The adit level has been driven east. Bargmann's lode to a considerable extent, which has laid open some good bunches of ore; the said adit in the present end is 54 fms. deep; a cross-cut has been driven north, which has reached a lode about 15 inches wide, producing good copper ore, blende, &c., and is of a most promising character; little has been done on it towards development. A shaft is being sunk with the intention of communicating with the deep adit; about 20 fathoms below the surface a lode has been met with, about 18 inches wide, composed of a beautiful gossan, black and yellow copper, and, from appearances, I am of opinion they are near to a great deposit of ore; this lode has made many rich deposits of ore in the north-west. I have not the least doubt as soon as this mine is developed it will prove exceedingly remunerative to the proprietors, as many of the mines have done in this once celebrated district—Great Wheal Towan, Wheal Music, United Hills, &c.

**EAST WHEAL FAIRMOUTH.**—Wm. Hancock, July 30: The new engine-shaft is below the adit level 7 fms. 4 ft.; the lode in the present bottom appears to be making a splice; it is now 12 in. wide, composed of flookan, capel, iron, and tin, not enough of the latter to value; sinking by nine miners and three labourers, at 111. 10s. per fm.; the labourers and horses for filling, landing, and drawing the water and stuff to be paid by the adventurers. No change to notice in any other part of the mine.

**EAST WHEAL FAIRMOUTH.**—J. Goldworthy, July 31: Homersham's shaft is in regular course of sinking below the 110. In the 110 east the north part of the lode has been cut into about 3 ft., which is composed of capels, iron, peach, &c., carrying a rich leader of ore from 6 to 8 in. wide, a kindly lode. In the 100, east of Davis's cross-cut, on the north part of the lode, the lode is 2 ft. wide, composed of peach, capels, muncie, &c., with a leader of ore 2 in. wide, of rich quality. In the 100, west of Davis's cross-cut, on the north part of the lode, the lode is 3 ft. wide, producing ½ ton of copper ore per fm. At John's winze, in the bottom of the 100, the lode is 4 ft. wide, of a kindly appearance, and produces a little ore, not to value. The stopes in the back of the 100, east of Oat's No. 1 winze, is worth 91. per fm. The stopes in the back of the 100, west of Oat's No. 2 winze, is worth 102. per fm. The rise in the back of the 100, on the south part of the lode, will produce 1 ton of rich ore per fm. The stopes in the bottom of the 80, on the north part of the lode, west of Boney's winze, is worth 81. per fm. The lode in the 80, west of Hitchens's shaft, is 4 ft. wide, of a kindly appearance, and produces

rich stones of ore. The lode in the 88 east is 2 ft. wide, composed of capels, quartz, prlan, peach, and ore, worth of the latter 1½ ton per fm.; the lode, although fallen off in value, has a kindly appearance to improve. There is little or no change in the 66 fathom level east since last reported on.

**EXMOUTH.**—J. P. Nicholls, J. Nicholls, July 30: The stopes in back of the 72 north is producing ½ ton of lead ore per fm. We have again picked into the lode in the winze in bottom of the 60, and find it looking equally as good as last reported. The 60 north is without alteration to remark on since last report. The same remark applies to all the other pitwork bargains.

**FOWEY AND PAR UNITED.**—J. Tredinnick, July 30: The engine-house is up, covered in, and ready to receive engine. The masons are getting on with boiler-house, bob-pit, and stack as quick as possible. Very little has been done in the cross-cut north lately, in consequence of the air being bad. The engine-shaft is down 5 fms. 3 ft. below the adit—sinking by twelve men and three boys; the ground is favourable for sinking, and most congenial for tin. We have driven on a lode in the adit in the south hill, which is about 3½ feet wide, producing some good tin work, and on the north part, beautifully spotted with yellow and grey copper ore. We expect to sink below the lode in about 15 fms. more sinking, which was a fine and tiny lode in the adit. The shaft will be continued to cut the south lodes which pass through, which are of a very fine character, and underlying towards the shaft; one of them is the lode alluded to above, which will be cut at about 60 fathoms.

**FRANK MILLS.**—J. P. Nicholls, J. Cornish, July 31: The 84 north has now reached the alide since in the levels above, and the end is in light kills. We shall, no doubt, have to drive a few fathoms here before we again meet with a settled lode. Since our last report we have intersected several branches containing lead ore in the 60 cross-cut west, and the last that we have gone through, which was intersected yesterday, is of some importance, being 18 in. wide, and will add 4 cwts. of lead ore per fathom. The ground is still presenting a fine-class appearance, and we think there is more lode yet in advance. There is no change in the 72 north to remark. We are putting up a rise in the back of the 60, north of the alide; the lode here will yield 7 cwts. of lead ore per fm., and it looks well for improvement. The various stopes are much as they have been for some time past, and we are making satisfactory progress with our wide stall in the 45. All other operations are progressing favourably.

**GAWTON.**—G. Rowe, July 27: The lode in the 36 west is laid open 5 ft. wide, and not yet cut through, and is producing good stones of ore, and letting out a considerable quantity of increased water. The lode in the 50 west is 2½ ft. wide, principally composed of quartz, muncie, flookan, and in places a little ore. The stopes in back of the same level are yielding 2½ tons of good quality ore per fm. The tribute department is without change. We weighed off yesterday May and June ore—41 tons 13 cwts. 3 qrs.

**GERNICK.**—C. Carkeet, Aug. 1: Spencer's engine-shaft is sunk 5 fms. below the 30; the lode continues large, and of much the same character as for some time past; we have set this shaft to sink to the 10, at 141. per fm. The lode in the 30 east is 2½ ft. wide, composed principally of muncie and quartz, with a little black oxide of copper; this is a very kindly end. In the same level west the lode is 2 ft. wide, composed of prlan and quartz. This lode is now being opened on the lode; this branch will drop into the main lode as we go down, and will be likely to become a feeder to it, as I have noticed that where ever similar branches have dropped into the lode they have produced favourable results.

**GREAT CARADON.**—F. C. Harpur, July 27: Since I last wrote to you I am glad to state the lode in the end, driving west of the 40 fm. level cross-cut, has further improved in appearance; yesterday it was quite 2 ft. wide, carrying a quantity of muncie, peach, and iron, intermixed with quartz, spotted with copper ore, and letting out some water. In the cross-cut I have nothing new to communicate, the ground being moderately easy for driving.

**GREAT CHINTINS.**—W. Woolcock, July 27: The ground in the new shaft is somewhat better than the old shaft; the lode is now making good progress; we have sunk this week about 5 feet, which makes the shaft now down about 5 fms. 4 ft. 6 in. below the 110 fm. level. The lode in the 100 west is looking well, and is gradually improving, every cut we put over the end and we are carrying the lode upwards of 6 feet wide, with a leader on the north part 1 ft. wide, producing good saving work, and the remaining part of the lode is producing good stones of ore, and if it continues to improve as it has done for the past week we shall be able to save all the lode, which being so large will produce a quantity of ore. The ground in the 100 cross-cut is not quite so favourable for progress, and we have no appearance of any lode yet. We have cut a small branch in the 90 cross-cut, about 2 in. wide, composed of spar spotted with ore, and underlying south about 4 ft. below the bottom of the shaft; this branch will drop into the main lode as we go down, and will be likely to become a feeder to it, as I have noticed that where ever similar branches have dropped into the lode they have produced favourable results.

**GREAT RETALLACK.**—W. H. Reynolds, July 27: In the shaft we have part of the lode 18 in. to 2 ft. wide, composed of a very beautiful quartz and some flookan, with fine muncie and prilla of lead throughout. This is fast enlarging in going down, and a more promising lode for lead than we now have I have not seen for a long time, and hope in a few days to be able to report a still greater improvement. The best stones of lead came from a large hollow place by the side of this leader of quartz, and, perhaps, 2 or 3 ft. below the bottom of the shaft, which looks as if we are on top of a good bunch of lead. **GREAT TREGUZE CONSOLS.**—W. Richards, Aug. 1: The lode in the 80 west is full 3 ft. wide, and its general character is equally as promising as when reported on last week; the leader part is 18 inches wide, composed of quartz, muncie, little prlan, and fine stones of yellow copper ore. There is more water issuing from the end, which seems to indicate a porous lode ahead. There will be a fine pile of ore work hauled to surface to-day.

**GREAT TWYNNHALL.**—J. Hampton, July 31: The plunger-pole in the 70 is working well, and that level is dry. By the latter end of the week we expect to put the drawing-lift to work, after which we do not contemplate long before we shall be down to the 70, where the lode is improved. We are making good progress in cutting down John's shaft. The same remark applies to building the second pumping-engine house, and everything looks very well.

**GREAT WEST SETON.**—H. Cowling, July 30: We are still working on the main lode in the bottom of the adit; the lode is 4 ft. wide, composed of sugary quartz, blende, muncie, and spots of copper ore; this lode going down has such a kindly appearance that I am daily expecting to have a good lode of ore. I think no time should be lost in erecting the steam-power to fork the water to see this lode in the bottom of the shaft, which is so much talked about by the old miners who worked there 40 years back. They say they cut more than 4 ft. into the lode, but did not reach the south wall. The part they cut was composed of sugary spar and yellow copper ore. They tell me this was all that was done at that level by the former workers, which is 13 fms. below the adit level. There are three lodes to the north of this, which will come in to advantage at a deeper level. There is also a very large lode south of the same, full 3 ft. wide.

**GREAT WHEAL BUSY.**—J. Delbridge, J. Bryant, J. Peterick, July 27: In the 110, east of Oat's, the lode is 4½ ft. wide, worth for tin 101. per fm. In the 120, east of Oat's, the lode is disordered by the elvans. In No. 1 winze, east of ditto, the lode is yielding 14 tons per fm. In No. 2 ditto, east of ditto, the lode is yielding 12 tons per fm. In the 100, east of ditto, the lode is yielding 12 tons per fm. In the 90 winze, east of ditto, the lode is yielding 15 tons per fm. In the 90, east of Matthe's, the lode is yielding 6 tons per fm.; good lode for tin, 10 ft. wide. Matthe's tin is worth 601. per fm. for copper and tin. Matthe's shaft, sinking below the 80, is worth 12 tons per fm. The 80, east of ditto, yielding low price tinstuff. The 70, east of ditto, yielding low price tinstuff. The 100, west of Fielding's, a large tinny lode. In the 90, west of Rowland's, saving work for tin. In the 80, King's rise, the lode is large—poor. In the 70 no change. In the 50 west large lode, stones of ore. We are making every preparation to put in a new balance-bob at the surface at Harvey's engine, and removing the engine and materials from Hallin-beagle to Boscawen's. We find the water to within 10 fms. of the adit; at present we do not see any increase of water from the stoppage of the stopes at the bottom.

**GREAT WHEAL MARTHA.**—H. Rickard, July 31: The engine-shaft is progressing rapidly below the 40, in good ground. The lode in the 40, east from engine-shaft, is producing good stones of ore—a very kindly lode indeed; only now having passed through the cross-course I expect an improvement here every day. The stopes in back of this level are worth for copper 301. per fm. The rise towards Thomas's shaft, in back of the 30, is up about 6 fms. I hope next month to form a communication with the 20, which, when completed, will enable us to draw the whole of our work on, and land it on the dressing floors. There is no material alteration in any of our tribute pitches. Upon the whole, they are looking well. We sampled some of quality copper ore on Friday last, and the engine is getting on well with fixing the engine, and to-morrow the crusher will be on the ground, when no time will be lost in erecting the same as quickly as possible.

—Aug. 1: We have a decided improvement in the 20, west from Thomas's shaft. In cross-cutting north through the lode upwards of 5 ft., and not yet through it. We have interested a leader that will yield about 4 tons of moderate quality ore per fm. Part of the crusher has arrived on the mine to-day; it is a first-rate article.

**GWYDYR PARK CONSOLS.**—Capt. Smyth, Aug. 1: We have set the deep adit to drive again by six men, at 81. 5s. per fm., stented 2 fms. We have not taken down any lode as yet, but shall do so next.

**HARWOOD.**—R. Race, July 27: We have had good ore this week in the cross-vine. In taking down the side of the drift we broke solid pieces of lead ore from 4 to 6 cwt. weight. We are likely to raise a good quantity of ore here, and if we should have an intersection from the east, I have no doubt of a rich mine. We have about 5 tons of ore ready to dress.

**HAWKMOOR.**—J. Richards, J. T. Phillips, July 30: The lode in the 25, east of Rowe's rise, continues a good lode, worth 3 tons of copper ore per fm. We are repairing the pulleys and stands, and sundry other things at surface during the stoppage of the eastern wheel. We weighed at Calstock on Friday last 93 tons of copper ore.

**HINGSBURN DOWN CONSOLS.**—J. Richards, July 31: The ground in the 120 west is becoming more granitic, and easier of progress. The 100 east is improved; the part of the lode carried will produce 5 tons of ore per fm. There is no change in any other part of the mine.

**HUCKWORTHY BRIDGE.**—J. H. Rodda, July 31: The lode in Hitchens's engine-shaft is 2½ ft. wide, composed of capel, muncie, peach, prlan, and occasional stones of ore. In the 25 east the lode is more defined, and producing some good stones of copper ore, intermixed with quartz and prlan.

**KELLY BRAY.**—S. James, July 27: The lode in the 75 east is somewhat improved in the past week; it is now about 2 ft. wide, yielding 1 ton of ore per fm., worth 51. per fm. The lode in the 55 east is 1½ ft. wide, yielding stones of ore. The tribute department has little improved in the past week.—Eastern Mine: The lode in the 70 east has yielded some good work in the past week, and is still looking very promising to become more productive ere long, as the character of the ground is more favourable for the production of copper ore than it was in the level above, and easy for progress. The lode in the 60 east is 2 ft. wide, composed of capel, quartz, muncie, and stones of ore, a strong looking lode, so that there is every reason to expect good results at the 70; the ground being easy for exploring, there can be a mine laid open in a short time after the above level is drained by the 70. There have been several tons of ore sold from the eastern mine, which was broken in the 60, and there are several tons on the mine of good quality copper ore, which came from the same place.

**LADY BERTHA.**—Capts. Harpur and Metherell, July 27: This being our pay and setting-day, the different pitches and bargains were re-set, particulars of which will be forwarded. We have no change to inform you of in any part of the mine.

—Capts. Harpur and Metherell, Aug. 1: In the 53 east we are not yet through the cross-course, which is letting out a large quantity of water, causing it to be very troublesome for exploring. The same level west is without any particular change; ground favourable for driving. In the 41 east we have cut through the lode, and find it to be about 3 ft. wide, composed of prlan, peach, muncie, and spots of ore; easier for driving than it has been for some time past. The stopes in back of the 41 west, east of Odgers's rise, presents much the same appearance as when we last reported, the lode being from 3 to 4 ft. wide, composed of quartz, muncie, and ore, worth of the latter about 4 tons, or 301. per fm. In the 30 east the lode is improving; it is quite 4 ft. wide, consisting of peach, quartz, and ore, worth of the latter 2 tons, or 81. per fm. In the 20 east we have a change for the better in the ground, it being just now a light-coloured granite, having a congenial appearance, with branches of spar, muncie, &c., crossing the end. The lode in the 10 east is from 3 to 4 ft. wide, composed of quartz, muncie, and ore—saving work in the tribute department there is no change to inform you of.

**LADY ELIZA.**—J. Evans, July 31: Since my last report the lode in the deep adit had been much for the better. Since last Friday it has assumed a very marked improvement, and began to expand towards its original width, and a most beautiful branch of very pure ore, 4 in. wide, under the hanging wall, and the whole lode is dredgy throughout, containing spar and gossan, and the water is on the increase. When the

lode was first discovered on the parish road it was only 1 in. wide, and it is now 4 in. at the bottom of the adit, and we have every hope that an improvement will take place in sinking below the bed of the river (say about 6 fms.), which, in my opinion, would prove by this small outlay, the true character of the lode; and should it, as I expect, increase in thickness, we shall have from the proposed winze fully 200 fms. of driving northwards and stopping ground of the depth of the sinking (say 6 fms. deep by 200 fms. in length), at 1 ton of lead ore per fm., will produce 1200 tons of ore, at 131. per ton, which will amount to 15,6001. A windlass will suffice to carry out the proposed winze, which is cut already, and we have only to remove the tackle from the top of air shaft and commence at once. There appears good stopping ground above the present driving, which Capt. M. Francis pronounced of great value. When the end is carried a few fathoms further on that will be satisfactorily proved without a speculative outlay. No. 2 is worked by two miners.

**LOWER PARK.**—W. Davies, July 31: The ground in the 20, at Paddock's shaft, is improving; there are some spots of ore in the joint. The shaft at the back of the office is going off very fast. We expect to get through to the top of the sump this week, when we shall be able to clear out the old sump, and we expect to find ore in the bottom. The cross-cut south from the west shaft is without alteration.

**MAUDLIN.**—W. Tregay, J. Tregay, July 27: South Mine: The lode in the rise in back of the adit is 3 ft. wide, principally muncie, with spots of ore.—West Mine: The lode in the adit end is strong and regular, with occasional stones of ore. In consequence of so much rain, the wheel has been set to work. We are pumping to-day, which will be continued while the surface water is sufficient to give us any chance of forking.

**MOLLAND.**—T. Bennett, July 30: The lode in the 32 east is much the same as last week, producing 1 ton of ore per fathom; the ground is a little harder than last month; set to six men, 2 fms., at 61. per fm., and to stop in the back at 31. 10s. per fathom, where the lode is worth 1½ ton per fm. In the 20 east, the branch referred to in my last is to all appearance the main part of the lode; it is now 1½ ft. wide, producing stones of ore; the ground is getting stiffer than last month; set to six men, 2 fms., at 61. per fm. The stopes in the bottom of this level are producing 1½ ton of ore per fm.; set to six men, 2 fms., at 41. 10s. per fm. I intend going to Barnstaple to-morrow to divide our parcel of ore, 60 tons.

**NANTEOS AND PENRHIV.**—H. Boudry, W. Paull, July 29: Eysantmeun: The lode in the 10 east is 8 ft. wide, composed of clay-slate, quartz, blende, and lead ore, yielding of the latter about 10 cwts. per fm. The lode in the 10 west is much the same in character, yielding from 10 to 15 cwts. of ore per fm. The winze sinking below the adit is yielding good stones of ore. The stopes over this level are yielding 10 cwts. of ore per fm. The stopes west of No. 2 rise is yielding from 10 to 12 cwts. of ore per fm. Reese's level east is yielding saving stuff for dressing. In Rowe's level west the lode is 4 ft. wide, containing muncie and blende, with spots of lead ore, but not sufficient to value. The stopes on an average in back of this level are yielding about 8 cwts. of lead ore per fm.—Bwlch Gwyn: In the 30 east no lode has been taken down during the past week, but when last taken down it was worth about 8 cwts. of ore per fathom. No change in the tribute department to notice. Our machinery is all in good order, and everything here is being pushed on as fast as possible.

**NETHER HEARTH.**—W. Vipond, July 26: We are sinking on the cross-cut north, and it is now worth 2 tons of lead per fathom. I shall send you the bargains for August next week. We are sinking Robinson's shaft, and the ground continues hard.

**NORTH BASSET.**—T. Glanville, G. Davey, July 31: In the flat-roof shaft the lode is completely in the granite, and presents a very promising appearance; it is 2½ ft. wide, composed of spar and good stones of grey ore. No alteration to notice in any other part of the mine.

**NORTH BULLER.**—J. B. Delbridge, July 26: The 78 west to drive by three men and three boys, at 71. per fm.; the lode in this end is from 10 to 12 in. wide, rich stones of copper and tin. King's shaft to sink by six men, at 121. 11s. per fm.; the lode in this shaft is from 18 to 20 in. wide, composed of quartz, prlan, with good stones of copper ore. The 42, east of King's, to drive by two men, at 31. per fm.; lode from 10 to 15 in. wide; ground favourable for driving. The 42, west of King's, by two men, at 21. 15s. per fm.; the lode in this end is from 6 to 8 in. wide, stones of muncie; ground favourable for driving. The engine and pitwork are working well.

**NORTH DEVON.**—J. Blamey, August 1: Vale of Girt: The new lode discovered in sinking the shaft we have now intersected at the adit level; it is 6 ft. wide, and contains particles of lead under the hanging wall—a more kindly and promising lode I never saw, and the same may be said of the old lode, which is in the same as last reported. We lode could be laid open to intersect the south lode.—Nap Down: The last shot in the stopes in back of the 10 brought down 6 cwts. of ore; this is further east than any part of the mine below the adit, and being virgin ground we may hope for a continuance of good ore ground. The ore is a much finer grain than any we have had before, and I am of opinion it contains a large proportion of silver.

**NORTH DOWNS.**—J. Browne, J. Grenfell, July 30: We shall finish cutting plat in the 60 this week, and commence sinking below the level next Monday for elstern and bearings. The 60 is driven east of shaft 2 fathoms; lode 3½ ft. wide, composed of spar and muncie, with a little peach, and letting out a large quantity of water. The 50 east is not quite so good to-day, now worth 751. per fathom; this is a very good course of ore. The 50 west is worth for copper 301. per fathom; this is a very promising level, and the farthest west of either level in this mine. The 40 west is presenting a better appearance than for some time past; lode 18 in. wide, producing good stones of ore. In the winze sinking below the 40 the lode is 4 feet wide, worth 301. per fm. Our pitches are producing the usual quantity of ore, and looking very well. No alteration in any other part of the mine. We hope to drive towards the 50 end, east from this winze, in course of a day or two, in order to open up the ground with greater dispatch.

**NORTH FORTESCUE.**—W. Veran, July 30: We have recently cut the Silver Vein lode in this mine, and at 4 fms. below surface we have gossan containing from 10 to over 300 cwts. of silver ore, the rest of the lode is silver ore. We are now bringing to the surface some lode some fathoms deeper, where we hope to be able to bring a parcel to market. The last sample, assayed by Mr. Jenkin, of Callington, produced 326 cwt. The Silver Vein lode traverses the entire length of this set, considerably over 600 fms.



fatal disease or to direct it, when developed, to a safe and favourable issue.



Providence, 34; Tincroft, 5½; West Caradon, 42; Wheal Kitty, 5½; He-

chair), the accounts for the three months ending May showed: Cals received, 1246l. 10s.; ore sold and sundries, 5199l. 7s. 1d.=6445l. 17s. 1d.—Balance last audit, 784l. 2s. 6d.; mine cost, 5323l. 15s. 11d.; new boiler, 238l. 13s. 10d.; leaving credit balance, 99l. 4s. 11d. The loss on the three months' working was 124l. 8s. 10d. Capt. Pryor, Bryant, Jenkin, and Grenfell reported that the mine was looking a shade better,



and if it continues as at present their position will in six months be materially changed. The secretaryship was transferred to Mr. W. J. Dunsford, and the meetings will be held alternately in London and on the mine. Thanks were voted to the lord (Mr. C. Trelawny) for reducing the dues to one-twentieth.

**At the East Wheal Agar general meeting, on Wednesday (Mr. Dunsford in the chair),** the accounts showed—Call, 1860, £1,105. 11s. 5d.; balance last audit, 851. 11s. 5d.; labour cost, 274. 2s. 2d.; merchants' bills, 452. 9s. 1d.; doctor and club, 92. 9s. 3d.; leaving a credit balance of 1861, 8s. 1d. Mr. F. Pryor, the agent, stated that for the next six months it was proposed that the operations should be confined to driving the adit and sinking the shaft, to meet the cost of which a call of 5s. per share would be adequate. The Chairman stated that the arrears would be readily paid. A call of 5s. per share was then made, and a vote of thanks to the Chairman terminated the proceedings.

**At Wheal Sidney meeting, on July 24, the accounts for April, May, and June showed a debit balance of 2357. 9s., and they have tin on the floors and ore broken in the mine valued at about the same amount. A call of 2s. per share was made. Several alterations were made in the regulations relating to the transfer in shares—one by altering the rule which at present stands as follows:—"That no transfer of any share or shares shall take place until all calls due on, or attaching to, the share or shares held by the party transferring are paid and satisfied, nor unless the names of the transferor and transferee be set out in full, with their residences and callings"—by substituting for the latter part of the rule, commencing at the words "or unless," the following phrase:—"Nor unless the name of the transferee be set out in full in the transfer; together with his description or occupation, and residence, the signatures of the transferor and transferee being duly witnessed, and the address and occupation of each witness being stated."**

**At the North Wrey Mine meeting, on Tuesday (Mr. T. Moore in the chair),** the accounts showed—Calls received, 457. 10s.—Balance last audit, 697. 14s. 9d.; mine cost, three months ending June, 361. 18s. 9d.; arrears of call, 501. 5s.; leaving credit balance, 57. 11s. 6d. A call of 2s. 6d. per share was made. Capt. Thos. Kemp reported that he believed a little contrivance would so increase the water power that it will be effective for all seasons of the year to pump, draw, and crush; if so, the mine will be most economically developed. The steam-engine is being erected, and the other necessary surface work fast pushed on.

**At Brynford Hall Mine meeting, on Tuesday (Mr. Page in the chair),** the accounts showed a debit balance of 1332. 9s. 11d. After some discussion upon the proposition that a call of 50s. should be made, it was agreed that the call should be 3s. per share. Messrs. Darlington had made an examination of the property, and reported favourably as to its prospects.

**At the Harwood United Mine meeting, on Tuesday (Mr. Page in the chair),** the accounts showed a credit balance of 2801. The report of the agent was read, and the committee of management were re-elected. It was stated that this mine was likely to take a very prominent position in the district.

**At the Harwood Mining Company general meeting, at Newcastle-on-Tyne, on Thursday,** the accounts showed a cash balance against the mine of 791. 6s. 4d., and 1031. 1s. 2d. liabilities. A call of 6d. per share was made. The captain reported they had just got fairly into the vein, and were breaking solid stones of lead ore, from 4 to 6 stones weight, and every prospect of speedy improvement.

**At South Caradon Wheal Hooper meeting, on Tuesday (Mr. Thornthwaite in the chair),** the accounts showed a balance of liabilities over assets of 5861. 8s. 1d. A call of 3s. per share was made. Details in another column.

**At Bedford Consols meeting, on July 26 (Mr. J. Rowlands in the chair),** the accounts for the three months ending May showed—Balance last audit, 741. 19s. 11d.; calls received, 2701.—Total, 19s. 11d.—Mine cost, 2381. 17s. 6d.; due on forfeited shares, 201. 6s. 6d.; leaving credit balance, 161. 1s. 11d. A call of 1s. per share was made. Capt. James Mitchell reported that they had fair probability of making some good discoveries. They will have about 40 tons by the end of the month, which, if sold at the present standard, would be worth about 1201.

**At Wheal Mary Emma meeting, on July 26 (Mr. John Rowlands in the chair),** the accounts for the three months ending May showed—Balance last audit, 511. 12s. 4d.; mine cost, 1631. 16s. 4d.; D. Stuart, 57.; calls received, 2111. 10s.; leaving debit balance, 81. 18s. 8d. Capt. W. Doble, reported that he had broken some fine tones of tin in a pit opened on the back of the lode by a large cross-course; he is convinced that there is a fine lode of tin there for a great length.

**At the Devon New Copper Mine meeting yesterday, (Mr. Otter in the chair),** the accounts showed a balance of assets over liabilities of 19001. The report of the directors was read, which, together with the proceedings of the meeting, will appear in our next.

**At Great Tregeone Consols Mine special general meeting, on Monday,** a resolution was unanimously passed to create 7000 new shares, at 5s. each. This new capital will enable the mine to put itself in the desirable position of being free from debt or liability, and from the flattering appearance of the mine at the present time it certainly appears to have the most promising prospects in the district. It has been under a cloud for the past two years, owing to a suit in Chancery, instituted by Mr. F. S. Thomas, to endeavour to regain possession of the mine, upon the plea that certain rules of the company had been infringed, which induced a forfeiture. Vice-Chancellor Wood, however, has decided for the second time in favour of the company, dismissing the bill with costs, thus removing that difficulty, which naturally deterred parties from investing in it.

**At the North Wheal Exmouth meeting, on Tuesday (Mr. Docker in the chair),** the accounts showed a debit balance of 3411. A call of 2s. per share was made. A resolution was passed, appointing Messrs. Docker, Lane, and Sneli a committee to enquire into and report upon the best means to be adopted with regard to the future of the mine.

**At the New Crow Hill Mine general meeting, on Wednesday,** the accounts were submitted and adopted. It appeared that since the last general meeting, held three months since, the mine has opened up with a gradual and continuous improvement, and that the return from some of the levels have been so increased as to render it necessary to erect 12 stamp-heads in addition to the six stamps hitherto employed. The committee of management submitted to the meeting that in consequence of the very important indications which had presented themselves during the last few weeks they had thought they should best discharge the duties entrusted to them by obtaining the opinion and advice of some mining authority who was totally unconnected with the undertaking, and they accordingly selected Capt. John Spargo, who, placing himself in communication with the agents, visited and inspected most minutely every portion of the mine. His report and also that of the company's agents, given in detail, were read to the meeting, and were received by the shareholders with the liveliest satisfaction, as they emphatically declared their opinion to be that "the mine is now beyond a speculation, and it is more than probable will very soon be classed with the dividend mines of Cornwall." Capt. Spargo's report went so far as to say that the mine ought to have more than paid its way for some time past, but upon this point satisfactory explanations were given by the committee, who unhesitatingly stated that the only reason why they had not been able to authorise the vigorous prosecution of the operations recommended by their agents was the sluggishness of the shareholders in paying up their calls. This impediment, however, now no longer exists, as all arrears of calls have been paid up, excepting upon 100 shares, which have been forfeited. A call of 1s. per share was made, and the meeting, after expressing their satisfaction with the manner in which the affairs of the mine had been conducted, separated, with confident anticipations of the prosperity of their property.

**At the Connorree Mining Company ordinary half-yearly general meeting,** held at the offices in Dublin on Wednesday, which was numerously attended, satisfaction was expressed with the progress made in the development of the new discoveries mentioned at the meeting at which the wish of the proprietors was to have the mine prosecuted with vigour. The directors justly remarked in their report, and which can be echoed in every branch of mineral industry, that "the extraordinary stagnation of the mineral trade throughout the empire, caused mainly by the war in America, has, of course, affected the sales and reduced the prices of ores. In common with other mines, we have felt the consequent depression; but we have deemed it more prudent to retain such ore as we have raised rather than to sell them at a great under-value, and to suspend to some extent for the present the further raising of ore in the old mines, contenting ourselves with a similar reaction will take place as did in the years 1848 and 1857, leading to a greatly increased demand, and a corresponding rise in prices." The directors, therefore, proceeded to state that as the mercantile classes have affected to hoard ore they defer placing a value on the stock on hand, so that the balance-sheet only shows the amount actually sold. During the six months ending May 31 the ore raised was 2593 tons, which consisted of 1926 tons of sulphur ore, 658 tons of pyrites, and 11 tons of copper precipitate. Within the same period no less than 942 fms. of ground had been sunk, driven, or costained, in the development of the mine, and Mr. Markham Browne, the manager at the works, remarks that "the highly mineralised character of the discoveries at Sroughmore, the extent and regularity of Glanville's lode in particular (opened up to the extent of 500 fms.), and the present favourable appearance of this lode, which we have already fully explained, as well as the opening up of the great quartz lode in Connorree, and the great probability of its being turned to advantage at a moderate expense, cause us to believe that our anticipations will be fully borne out." The balance-sheet, or capital account, shows that 37481. 15s. 2d. have been expended during the six months between Nov. 30, 1860, and May 31, 1861, leaving a balance to working account of 10,018. 19s. 4d. The working account gives to balance from capital account, 10,018. 19s. 4d.; amount due to sundry, 6261. 11s. 4½d.; reserve fund, 3001.; net proceeds of sale, 10471. 15s. 9d.; balance of interest account, 1421. 7s. 4d.; transfers fees, 511. 13s. 6d.; balance of profit and loss on Nov. 30, 1860, 10,061. 4s. 9d.—13,253. 12s. 0½d. On the other side credit is taken by premises at Wicklow, 2261. 0s. 3d.; mining expenses, 20871. 13s. 10s.; management, 4691. 19s. 8½d.; bills and cash in hand, 7661.; amount due by sundry, 337. 11s. 8d.; loan on Government security, 4s. 10d.; 48891. 1s. 2d.; stock of metals, timber, horses, &c., 10851. 10s. 11d.; ore stock account on Nov. 30, 1860 (4653 tons, being the estimated quantity on hand May 31, 1861), 30351. 14s. 6d., making collectively the corresponding sum of 13,253. 12s. 0½d. The directors state that a patent has been recently taken out by Mr. F. W. Daehn, of Swansea, for extracting copper from ores of low percentage, and from "the numerous trials made of this process at Neath, under the personal inspection and assistance of Capt. G. Roberts, it seems to be peculiarly applicable not only to this particular lode but also to all the other coppery ores of the mine. Arrangements have been made with the patentee for an express trial here, under his own immediate supervision, and a very short time will test the value of this discovery to the company. We are also preparing, as referred to in our last report, to dress by machinery, now at the mines, our poor sulphur ores, so as to render them more valuable; this, combined with the successful application of the patent for rendering the copper in the quartz lode available, will, we trust, form an important feature in our next report." The Chairman said the directors had placed before the shareholders in the two reports which had been read almost all that could be of interest in relation to the progress and prospects of their mines. He might, however, observe—though the fact was well known to most of the shareholders—as old established and developed mines—the old mines of Connorree, and, in addition, they had taken as a matter of certainty that they are able, from those mines alone, fully to remedy the promise originally made—that they were able to raise annually such a quantity of ore as would enable them, if they had sales at a fair price, always to pay a dividend. Upon the occasion of the last meeting the shareholders, with the cheerful concurrence of the directors, agreed to suspend the dividend, and with great wisdom decided to apply the money thus obtained as they would employ their capital. The money resulting from the cause they had husbanded carefully, and in the meantime taking that course in reference to the old mines, they were fortified by what they had taken place with respect to those mines at two periods of great depression in the mineral trade. He alluded to the years 1848 and 1857, when these mines belonged to Mr. Brown. On both these occasions he met the same difficulty, and he found that great depression and suspension in the demand for ores were necessarily followed by an increased demand, and a commensurate rise of price. What happened before they consented expected would happen again; and for the present all they had done was to suspend the turning out of money of the ores which they possessed until they could dispose of them at a remunerative price. (Hear, hear.) They had all reason to congratulate themselves with respect to the new mines of Sroughmore. If they had not pushed forward those works in the manner they had done, they would really not have known

what to do with some of their money, or with the hands whom they had thought it right to suspend from labour on the old mines; but, fortunately, they had been able to employ that money and the hands in the development of this new undertaking. He believed that any shareholder who went to the works and inspected them would be well pleased with their condition. The retiring directors were re-elected, and a vote of thanks given to the board for their services.

**At the Great Wheal Alfred meeting, on Tuesday (Dr. A. Beattie in the chair),** the accounts showed a balance of liabilities over assets of 37701. A call of 3s. per share was made. It was agreed that a special general meeting be convened, for the purpose of taking into consideration the expediency of stopping the mine.

**At the St. Day United Mines meeting, on July 25 (Mr. J. Balster in the chair),** the accounts showed a debit balance of 14441. 19s. 11d. A special report from Captain Charles Thomas was read. It stated that at Billings' a substantial and valuable tin lode is discovered at the 154 fms. level for 50 fms. in length—bottom of the level standing entire. The shaft and winze below that level show improvements in depth. Beyond the said 50 fms. in length, judging from the 144 fms. level westward and eastward, a great length of good tin ground may be confidently expected, and that to hold down to a very great depth. It cannot be perceived the probability of any unfavourable rock coming in contact with the lode for a very great depth. With the present mode of draining the water by horizontal rods from Trussell's (of 145 fms. in length) at the 124 fms. level, great difficulty in sinking much deeper may be expected, and frequent interruptions to the working in winter, if not in summer. After having examined the plan, as well as looked at the underground workings to some extent, and having obtained free and full information on the matter from Mr. Pryor and the other agents, he formed the opinion that the best plan of working, for a long period, this extensive run of tin ground, is that of erecting an 80 or 85 inch steam-engine on Opie's shaft, which is perpendicular to the 124 fms. level. A diagonal shaft for a rod and drawing ore must be made from the 70 fms. level down to the 154 on the course of the lode. Opie's shaft is about 35 fms. east of Billings', in a good position for the main engine-shaft to be sunk continuously on the course of the lode. The report of Mr. F. Pryor, the agent, was also read. It was agreed that the purchase of an engine and machinery be made, and that the recommendations in the reports be carried out. The purser and manager were requested to make application to the lords for a suspension of the dues. A call of 2s. per share was made, and the committee were re-elected.

**At the Wheal Henry meeting, on July 25 (Mr. J. Balster in the chair),** the accounts showed a balance of liabilities over assets of 3801. 16s. 1d. A call of 10s. per share was made. The committee of management were re-elected. The report of Mr. Francis Pryor was read, which stated that he had no hesitation in pronouncing the mine no ordinary speculation.

**At the Wentnor (Pantasa) Mine meeting, on Tuesday (Mr. Wessel in the chair),** the accounts showed—Calls received, 5051. 10s.—Mine cost, 2011. 8s. 11d.; balance last audit, 151. 11s. 8d.; calls in arrears, 3771. 5s.; leaving credit balance, 261. 4s. 5d. A call of 3s. per share was made. The directors reported that the works were proceeding most satisfactorily. Some fine ore recently cut in the 64 yard level was exhibited at the meeting. The proprietors of the mine near the eastern boundary are proving the Bwyll-gwyn lode, and Lord Hill and seven Stars will be intersected at a shallow depth.

**At the Casara Mine meeting, on Wednesday,** a resolution was passed, requesting the directors to call a special meeting to consider the propriety of winding-up the company.

**At East Trevenen Mine meeting, on July 24, the accounts showed a debit balance of 1401. 0s. 8d. A call of 5s. per share was made. The claim of Mr. John Perry, for valuing surface lands at Manhey, was disallowed; and the purser's salary increased to four guineas per month, and the manager's five guineas per month. Captain W. Truran reported on the mine—"Since the commencement we have opened the following places:—Adit shaft, near eastern boundary, 13 fms.; deep adit on counter lode, 30 fms.; shaft from cross-cut north, 14 fms.; ditto west on branches, 15 fms.; sunk High-dip shaft from surface, 14 fms.; sunk Pryor's shaft, 10 fms.; sunk footway shaft, 8 fms.; making a total of 94 fms. All these shafts are in good working order. The deep adit has been a very tedious and costly affair, owing to it being so hard, costing for some distance 201. per fm., including wheeling and drawing; but it is pleasing to state that the communication with the adit has placed the company in a safe and fair position for prosecuting the mine."**

**At the Great Moelwyn Slate Company meeting, on July 26 (Mr. Otley in the chair),** the directors reported that they did not contemplate being able to pay any dividends for at least 18 months, owing to exploratory operations being carried on to secure the ultimate success of the mine, in which the directors have increased confidence. There are arrears of calls amounting to about 10001. The monthly expenditure is estimated at 4001. A call of 10s. per share will be required in August. Capt. W. Griffiths reported upon the various points of operation.

**At the Consolidated Copper Mines of Cobre meeting, on Tuesday (Mr. George Hibbert in the chair),** the directors reported that they would have been enabled to have continued the 21. dividend, notwithstanding several accidents to the machinery, had not the great fall in copper (equal to 131. 10s. per ton of metal, or 21. per ton of ore) affected their receipts. The produce of the first five months of this year has increased to the extent of 386 tons as compared with those of last year, and the general works at the mines are proceeding very satisfactorily. It was mentioned by the Chairman that since the report was written advices had been received from Cuba, stating that a lode had been cut at the Gitanilla Mine, referred to in former reports, but that the water would, for a few days, prevent its being proved; and Mr. Pascoe C. Glyn was elected a director in place of Mr. C. W. Grenfell, deceased; and Mr. Pascoe Du Fre Grenfell was elected auditor in place of Mr. P. C. Glyn, resigned. A dividend of 12,0001. (11. per share) was declared.

**At the Lusitanian Mining Company meeting, on Thursday,** the directors declared a dividend of 7501. (1s. 6d. per share).

**At the Port Phillip and Colonial Gold Mining Company meeting, on Wednesday (Mr. J. D. Powles in the chair),** the accounts showed a profit for the six months ending March of 10,0581. 7s. 5d. The profit for April was 23051. A distribution of 1s. per share was made. Details in another column.

**At the United Mexican Mining Association meeting, on Wednesday (Mr. C. Morris in the chair),** the London audited account showed credit balance of 5091. 12s. 6d., which, added to the remittance of 93121. 0s. 5d. since received from Mexico, makes a total of 98151. 12s. Out of this sum 3671. 2s. 3d. has been paid upon interest and dividend account, and for directors' fees, and there are liabilities chargeable upon it of interest on new loan, 12501. 17s. 7d.; and percentage of new loan repayable on September 13 next, 6671. 8s.—79221. 5s. 7d.; leaving a surplus of 15261. 5s. 1d. But as there are unclaimed dividends, auxiliary capital, and red scrip, for which the company is liable, amounting to 5071. 10s. 11d., to meet which the company has only the above surplus of 15261. 5s. 1d., there is really a balance against the association of 34451. 5s. 10d. Messrs. Morris and Weston, who retired by rotation, were re-elected directors, and Mr. William Adam was chosen director in place of Mr. Joseph Tasker, deceased. Mr. John Hibbert was re-elected auditor. Details will be found in another column.

**At the New Grand Duchy of Baden Mine meeting, on Tuesday (Mr. Dunsford in the chair),** the accounts showed a balance of assets over liabilities of 6911. 17s. 4d. The annual report from Capt. Richards was read, and considered of a very favourable character. Additional capital was required, and the directors proposed to raise it by the creation of 3000 shares of 11. each, to be offered rateably to the present proprietors, at a discount of 15s. per share. The report of Captain Richards was considered satisfactory. It stated that the reserves of the mine had increased. The Chairman stated that the proprietors had been already informed it was proposed to adjourn for a fortnight, to obtain the sense of the shareholders with regard to the proposal to create new shares for the purpose of raising additional capital. He was glad to be able to inform the meeting that a very large proportion of those new shares had been accepted, some applications having been made for additional shares. Mr. Little enquired if the board considered the amount of capital they proposed to raise adequate for their requirements?—The Chairman said that subject had been under the consideration of the board, and considering the loss which had been sustained during the past year, and the prospects of the future, they calculated the amount they proposed to raise quite sufficient for their requirements. Even in the absence of any discoveries, which they confidently hoped would soon be made, their agent considered, with the reserves now on hand, that he would be able to prosecute their operations at a smaller loss than had been sustained during the past year. It was satisfactory to observe that the mine was gradually improving, and that they were gradually lessening their periodical loss. After some further discussion, the meeting was adjourned, after a vote of thanks to the Chairman.

**At the Clarendon Consolidated Copper Mining Company of Jamaica (half-yearly) meeting, there being an insufficient number of shareholders present to form a quorum, the proceedings were of a formal character. The directors' report (an abstract of which appeared in last week's Journal) was considered of a very satisfactory character. The agent's report will be found in another column.**

**At the South Europe Mining Company meeting, on Tuesday,** the directors reported that the accounts were incomplete, which, however, was not very material, as they had given, respectively, 1½, ¾, 2½, and 5¾ per cent. for copper. An abstract of the report appears in another column.

**At the Australian Mining Company meeting, on Monday (Mr. Palmer in the chair),** the accounts showed a cash balance of 4091. 14s. An offer of 20,0001. was made for the purchase of the Tungkill estate, but it appeared a much better offer had been made by a party willing either to purchase or lease the property. The reserve price put upon the Chartist estate was 50001. Details in another column.

**At the Dun Mountain Copper Mining Company meeting, on Wednesday (Mr. Arnold Rogers in the chair),** the accounts showed a balance in hand of 17,4381. It was stated that the company possessed an inexhaustible quantity of chrome ore, for which in England and on the Continent there exists a demand equal to any supply, and at prices which would leave a handsome profit. A chemical broker states that he could readily dispose of 500 tons per annum at contract prices, bi-chrome makers being exceedingly glad that a new source of supply has been discovered. The railway from the mines to the port of shipment would, it was anticipated, be sufficiently completed for the transmission of the ore by the end of the year. Details in another column.

**OUR MINERAL WEALTH.**—The annual Annual Statistics of the Mineral Wealth of the United Kingdom—those for 1860—are of a very satisfactory character, and show that, notwithstanding the general depression in commercial circles, the progress of our mineral and metallurgical industries has been continually onward. The value of the minerals raised in 1860 was 26,404,4591., against 24,226,5261. in the preceding year—an increase, 2,177,9331. The value of the tin, copper, lead, silver, zinc, and pig-iron manufactured from the ores of those metals raised during the period was 16,939,7171., against 15,447,0861.—increase, 1,492,6311.; of other minerals and metals, 170,9271. in 1860, against 95,0001. in 1859; and of coals, 20,010,6741. in 1860, against 17,994,9411. in 1859, thus showing the aggregate value of our metals and minerals when brought into the ordinary commercially marketable condition, to have been 37,121,3181. in 1860, against 33,537,0271. in the preceding year—the increase being equal to 3,584,2911. Mr. Hunt's volume has this year been enriched by the appending of a general statement of the progress of British mineral industry since the publication of the Statistics was commenced.

**At Valparaiso "copper is so low as scarcely to cover the price of labour."**

**RAILWAY CALLS.**—The amount falling due in August is 1,018,6601.—making the total called in the eight months of 1861, 9,128,5091.

## LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Minera Mining Company.....	92	£12 8 0	W. J. Cookson & Co.
ditto.....	91	11 0 0	Walker, Parker, & Co.
ditto.....	90	11 11 0	ditto
ditto.....	50	11 15 0	ditto
ditto.....	7	12 2 0	W. J. Cookson & Co.
Tamar Consols.....	60	19 2 6	Stock & Co.

## BLENDE.

Mines.	Tons.	Price per ton.	Purchasers.
Great Retallack.....	230	£1 10 0	Vivian & Sons.

## BLACK TIN.

Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Rosewarne Consols.....	0 13 1	£27 0 0	£ 44 8 0	—
Drake Walls.....	4 5 0	68 10 0	—	Daubuz & Co.
ditto.....	4 5 0	68 10 0	—	Blascoe & Co.
ditto.....	10 10 0	64 12 6	—	R. Mitchell & Co.
St. Wh. Buay.....	11 2 1	61 15 0	656 8 10	Carvedras.
ditto.....	2 0 3	46 5 0	94 14 2	ditto
New Wh. Vor.....	3 1 0	60 7 6	184 16 6	Chyandour.

## COPPER ORES.

Ticketings for about 13½ tons Copper Ore, ex Elizabeth Jacomine, at LIVERPOOL, July 27.			
Sims, Williams, & Co.....	25	18 0	
Charles Lambert.....	5	18 0	
Newton, Keates, & Co.....	6	4 0	
Ticketings for 155 tons Copper Ore, ex Octavia, from Seville, at LIVERPOOL, July 27.			
Sims, Williams, & Co.....	£2 12 6	Hutchinson & Earle.....	£3 3 0
Williams, Foster, & Co.....	2 17 6	Newton, Keates, & Co.....	3 5 0
J. Keys & Son.....	2 17 6	J. Radley, jun.....	3 17 3
Charles Lambert.....	3 0 0	Evan & John Bryan.....	3 18 6

## COPPER ORES.

Sampled July 10, and sold at Swansea July 30.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Chill.....	67	23½	£ 18 14 6	Knockmahon.....	60	11½	£9 9 0
ditto.....	62	23	18 13 0	ditto.....	32	11½	9 13 0
ditto.....	61	23	18 12 0	ditto.....	106	9½	7 14 6
ditto.....	59	23½	18 13 0	ditto.....	93	10½	8 15 6
ditto.....	59	23½	18 13 0	ditto.....	45	10½	8 13 6
ditto.....	67	23½	19 17 6	Lochwinnoch.....	14	2½	4 12 6
ditto.....	63	24½	20 9 0	ditto.....	9	4½	3 6 0
ditto.....	62	23½	19 12 0	Aus. Regulus.....	14	5½	46 19 0
ditto.....	61	25½	21 4 0	ditto.....	4	5½	47 5 0
ditto.....	59	24½	20 1 0	Precipitate.....	12	49	41 18 6
Knockmahon.....	61	11	9 3 0				

## TOTAL PRODUCE.

Chill.....	621	£12126 18 0	Australian Regulus.....	18	£ 846 6 0
Knockmahon.....	397	3459 5 0	Precipitate.....	12	503 2 0
Lochwinnoch.....	23	49 19 6			

## COMPANIES BY WHOM THE ORES WERE PURCHASED.

Mines.	Tons.	Amount.
Copper Miners Company.....	124½	£1088 9 9
Freeman and Co.....	29½	567 11 0
F. Grenfell and Sons.....	126½	2268 13 0
Vivian and Sons.....	91	1845 17 0
Vivian and Sons.....	109	1067 19 0
Williams, Foster, & Co.....	250	4700 9 6
F. Bankart.....	81	1354 7 6
C. Lambert.....	128½	1014 0 9
Sweetland, Tuttle, and Co.....	121	2398 3 0
Total.....	1071	£16,985 10 6

Copper ores for sale at Swansea, August 13.—Cobre 100, 36, 47, 93, 54, 82, 71, 13—Knockmahon 68, 65, 54—Seville 43, 42, 6, 2—Ballycummisk 35, 31, 26—Hunerton 28, 2, 20—Mount Craig 27—Australian Regulus 15—Australian ore 2—Knockmahon 73, 49.—Total, 1236 tons.

## AVERAGES.

Produce.	Price.	Standard.
British.....	11½	£ 9 5 9
Foreign.....	23½	20 6 0
Sale.....	18½	£15 17 0
Totals—British, 432; Foreign, 639=1071 tons (21 cwts.).		£96 9 6

## COPPER ORES.

Sampled July 17, and sold at Tyack's Hotel, Camborne, Aug. 1.

Mines.			Tons.			Price.			Mines.			Tons.			Price.		
Wheal Clifford.....	100	£ 5 6	Condurow.....	21	£2 4 0	South Frances.....	70	6 7 6	ditto.....	49	7 2 0	East Crippin & So. J. ....	6	3 18 6	Wheal Seton (Pendarras)	69	5 2 0
ditto.....	91	3 14 6	ditto.....	16	0 2 6	ditto.....	49	7 2 0	ditto.....	48	4 12 6	ditto.....	57	1 6 0	ditto.....	49	4 10 6
ditto.....	82	3 14 6	South Frances.....	70	6 7 6	ditto.....	49	7 2 0	ditto.....	48	4 12 6	ditto.....	49	2 8 0	ditto.....	50	2 2 2
ditto.....	75	7 16 0	ditto.....	49	7 2 0	ditto.....	48	4 12 6	East Crippin & So. J. ....	6	3 18 6	ditto.....	49	2 8 0	Trevelock.....	88	2 3 0
ditto.....	74	4 14 0	ditto.....	48	4 12 6	ditto.....	48	4 12 6	ditto.....	53	5 13 6	ditto.....	43	4 1 6	ditto.....	50	2 6 6
ditto.....	72	4 14 0	ditto.....	48	4 12 6	ditto.....	43	4 1 6	ditto.....	43	4 1 6	Wheal Seton (Pendarras)	69	5 2 0	ditto.....	47	2 8 6
ditto.....	60	3 14 0	East Crippin & So. J. ....	6	3 18 6	ditto.....	36	1 15 6	ditto.....	36	1 15 6	ditto.....	12	5 14 6	ditto.....	2	10 8 0
ditto.....	32	6 2 0	ditto.....	53	5 13 6	Wheal Seton (Pendarras)	69	5 2 0	ditto.....	57	1 6 0	ditto.....	54	8 14 8	ditto.....	43	15 9 0
ditto.....	22	4 10 6	ditto.....	43	4 1 6	ditto.....	43	4 1 6	ditto.....	49	2 8 0	ditto.....	43	0 0 0	South Tolgus.....	82	3 18 6
Engine Ore.....	52	4 14 6	ditto.....	43	4 1 6	ditto.....	43	4 1 6	ditto.....	50	3 17 0	ditto.....	50	3 17 0	ditto.....	34	7 11 6
East Pool.....	72	4 3 0	Wheal Seton (Pendarras)	69	5 2 0	ditto.....	36	1 15 6	ditto.....	34	7 11 6	Stray Park.....	60	4 3 0	ditto.....	44	11 14 8
ditto.....	62	4 1 0	ditto.....	57	1 6 0	ditto.....	47	2 8 6	ditto.....	47	2 8 6	ditto.....	60	4 3 0	ditto.....	34	8 3 0
ditto.....	60	3 12 6	ditto.....	49	2 8 0	ditto.....	47	2 8 6	East Basset.....	54	8 14 8	ditto.....	44	11 14 8	ditto.....	25	1 13 0
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### CONSOLIDATED COPPER MINES OF COBRE.

At a HALF-YEARLY GENERAL MEETING of the proprietors of the association, held at the offices of the company, Gresham House, Old Broad-street, this 30th day of July, 1861, GEORGE HIBBERT, Esq. (Chairman) in the chair.

The advertisement convening the meeting having been read, the following report was read:—

In accordance with the Deed of Settlement, the directors submit to the shareholders the audited account for the year 1860. In the last report it was stated that up to October the produce had continued to improve, but that in November, owing to accidents to the machinery, that month's produce had considerably fallen off, and from the same cause, during the first ten days of December no ores were raised at the mines. These drawbacks have materially affected the account now laid before the meeting, but they would have been surmounted, and the directors would have been able to have declared the same dividend as during the last two years, had the price of copper, and consequently of the ores, continued at what it ruled during the year 1859 and up to August last. During these periods the average price of copper was 12½d. per lb., whilst at the present time it is only 10½d., lower than it has been for many years past. This difference is equal to 13½s. per ton of metal, and as 6 tons of the Cobre ores make 1 ton of metal, it will at once be seen that the difference is more than 21s. on each ton of ore, which, upon a produce of 1100 tons per month, amounts to a very large sum of money. Under these circumstances, the directors regret they are unable to recommend a larger dividend than 11s. per share, which is now declared, payable on and after Tuesday, the 20th day of August next. As regards the mines, notwithstanding the accidents referred to, the decrease on the year's produce is only 211 tons, being 13,601 tons, as compared with 13,812 tons for 1859; whilst, on the other hand, the percentage of the ores has improved from 15 to 16½. This advance is partly attributable to the new machinery which has been sent from England for the purpose of improving the quality of the ores. The produce for the first five months of this year has been increased to the extent of 386 tons as compared with those of last year, and the general works at the mines are proceeding very satisfactorily. Under all these circumstances the directors have every reason to expect that when confidence becomes more established on the Continent, and the differences in America settled, trade will improve, and consequently the affairs of the company will resume their former prosperous position. In the meantime, every exertion will be made to reduce the expenditure, as far as it can be done consistently with the efficient working of the mines. On the present occasion the shareholders will have to elect a director in the place of Charles William Grenfell, Esq., deceased, and an auditor in the room of Pascoe Charles Glyn, Esq., resigned. For the office of director, Pascoe Charles Glyn, Esq., is the only candidate, and for that of auditor Pascoe Du Pre Grenfell, Esq. At the close of this meeting a ballot will take place for their election.

It was then moved, seconded, and carried unanimously:—  
That the report and accounts now read be received and adopted. That the best thanks of the meeting be given to the chairman and directors for their services in conducting the affairs of the company.

The ballot was then proceeded with, when Pascoe Charles Glyn, Esq., was elected a director of the company, in the room of Charles William Grenfell, Esq., deceased; and Pascoe Du Pre Grenfell, Esq., was elected an auditor, in the place of Pascoe Charles Glyn, Esq., resigned.

### CONSOLIDATED COPPER MINES OF COBRE.

Notice is hereby given, that a DIVIDEND OF ONE POUND PER SHARE, free of income tax, will be PAID to the holders of certificates in this company, at the offices of the association, Gresham House, Old Broad-street, on and after TUESDAY, the 20th day of August next, between the hours of Eleven and Three o'clock. The proprietors must leave their certificates for examination three clear days before the day of payment.

WALTER SHARP, Directors of the  
GEO. WHITMORE Company.

Gresham House, Old Broad-street, July 30, 1861.

### CONNORRE MINING COMPANY (LIMITED).

At a GENERAL MEETING of the Connorre Mining Company (Limited) held this day, at their offices, 46, Dame-street, Dublin,

JOHN FRANCIS WALLER, Esq., LL.D., in the chair,

The following resolutions were passed:—

Proposed by the CHAIRMAN, seconded by MARTIN BURKE, Esq., and resolved:—

That the deposit statement of accounts now read be received and adopted, and that the same be printed for distribution among the shareholders.

Proposed by WILLIAM GIBSON, Esq., seconded by JOHN SMITH, Esq., and resolved:—

That the usual remuneration be paid to the directors for the ensuing year.

Proposed by EDWARD FOTTELL, Esq., seconded by GEORGE BOLTON, Jan., Esq., and resolved:—

That John Francis Waller, LL.D., and Henry Shaw, Esq., be re-elected directors of this company.

Proposed by JOHN KNIGHT BOSWELL, Esq., seconded by ROBERT MOLLOY, Esq., and resolved:—

That Arthur Moore and James West, Esqs., be the auditors for the ensuing year, and that a sum of £10 be paid to the said auditors for each half-year's audit.

Proposed by MARTIN BURKE, Esq., seconded by R. FREDERICK SHAW, Esq., and resolved:—

That the best thanks of this meeting be given to the chairman and directors for their attention to the interests of the company.

F. W. GREENE, Secy.

46, Dame-street, Dublin, July 31, 1861.

### THE CENTRAL SNAILBEACH MINING COMPANY (LIMITED).

Capital £10,000, in 10,000 shares of £1 each.

Deposit, 2s. 6d. per share, payable at Messrs. Roche and Co.'s, Bankers, Shrewsbury.

For detailed prospectus, see Journal of July 27, page 490.

REPORT OF MESSRS. PHILLIPS AND DARLINGTON, 25, GRESHAM-STREET, LONDON.

July 13, 1861.—This sett is situated two miles from the Minsterley railway station, and about twelve miles from the town of Shrewsbury. It encloses an area of 295 acres, and is a westerly continuation of the ground now so largely profitable to the Snailbeach proprietors. This mine is justly celebrated as one of the most remunerative in the Kingdom, and has been more or less actively worked for more than 50 years, during which period the aggregate yield of ore has been enormous, whilst the present returns are the rate of about 3300 tons per annum, affording a revenue probably little short of £50,000. The lode runs in an east and west direction, having a varying inclination or dip southward. It is also irregular in its width. The ore obtained are remarkable for their purity, and bear a high reputation for glazing purposes. When found near the surface, they are chiefly associated with sulphate of baryta, but at an increased depth this matrix gives place to a large quantity of carbonate of lime and quartz. These ores are readily enriched by washing, and easily smelted, and would be valuable to the smelter as a fuse for ores of a more refractory nature. The Snailbeach workings have now attained a depth of 372 yards from the surface, and extend longitudinally fully 1000 yards. The subreast of one of the western levels is steadily advancing towards the Central Snailbeach boundary, and the shoots of ore are found dipping in this direction. On referring to the lithographic plan of the district, the relative positions, not only of this property, but also of the New Venture Mine, will be seen. In addition to this, the probable course of the lodes have been laid down by Mr. David Davies, one of the officers of the Snailbeach Mines. It will be observed that six east and west veins are believed to traverse the sett, viz.—1. Supposed Snailbeach main vein.—2. Vein crossing level.—3. Strong vein.—4. Davies's vein.—5. Black Hole vein.—6. Supposed Pennerly vein. It may be here noticed that the actual strike of Snailbeach main vein through the Central Snailbeach property has yet to be ascertained, but this may be readily effected either by boring or otherwise, by means of the western drives, which are now being pushed forward from the Snailbeach property. The operations hitherto have been confined chiefly to the ground lying on the southern boundary, where facilities are afforded for making shallow adits. The northern portion of the sett still remains unexplored, owing to its being covered by a layer of shale, which appears to deepen towards the north-eastern corner of the grant. Two cross-cut levels have been driven—that called Lawrence's, intersecting the Black Hole vein, measuring 253 yards in length; and Crow's Nest level, 532 yards in length. These levels are of ample working size, and are in good condition. A drawing and ventilating shaft has also been sunk to the latter level. Considering the very limited depths to which the ground has been explored by these levels, and the well-known geological formation of the country, it is not surprising that the discovered lodes have not been extended on in length. A level is, however, being driven on the strong vein, which affords highly promising indications. It would doubtless be judicious to make a vigorous trial of this vein in the direction of the boundary, but until a greater depth has been attained it would be unreasonable to look for any permanent results. This observation will also apply to the other workings which at present exist. In order to explore the ground at a depth below the water level, it will be necessary to erect pumping apparatus, but this need not require to be either heavy or expensive. Surface water with a considerable fall is obtainable, consequently turbines may be readily introduced, not only to pump, but also to draw the stuff, thus working with great facility and at comparatively small cost. The reasons which should induce an active development of this property are the following:—1. It is a continuation of the Snailbeach ground, and presents similar lithological characteristics, whilst the workings of this extraordinary mine are being regularly advanced towards it, and are now only some 300 yards distant from the boundary, thus showing the value entertained of the Snailbeach lode in this direction by the Snailbeach adventurers; moreover, its productiveness is proved to continue to a great depth.—2. The slate through which the lode strike is not only contiguous to another rock—viz., the Sripstones—but it is also highly metalliferous, and has yielded, from various points westward, a very large amount of ore.—3. Both the Strong and Davies's veins, particularly the former, present a highly encouraging appearance for affording valuable deposits of ore at an increased depth.—4. The underground water will be very light, and may be pumped by the application of hydraulic machinery. The foregoing considerations induce us to consider this piece of ground to be worthy of more extensive and systematic development, and we are further strongly of opinion that should it be proved, as there is every reason to believe, the Snailbeach lode run through this property they will, if judiciously developed, afford remunerative and lasting results.

PHILLIPS AND DARLINGTON.

\* The Snailbeach Mine is eastward.

### TO ADVENTURERS IN FOREIGN MINES.—MR. HARRY

THOMAS VERRAN, of PLACENTIA, NEWFOUNDLAND, who has had considerable experience (under the tuition of his father, and in connection with many other experienced Mining Engineers) is ready to UNDERTAKE THE EXAMINATION AND REPORTING UPON MINERAL PROPERTIES IN Newfoundland, the United States, or any other country, where his services may prove useful to capitalists. The greatest confidence may be placed in Mr. VERRAN, who will use his best judgment in giving reliable information to those who may repose confidence in him.

### LEICESTER AND CO. (late Leicester, Brache, and Teague)

CONSULTING MINING ENGINEERS AND SURVEYORS, AND GENERAL MINING AGENTS, MELBOURNE, VICTORIA, PROCURE MINING LEASES ON ELIGIBLE TERMS FROM THE GOVERNMENT OF VICTORIA AND NEW SOUTH WALES, on receipt of a remittance for £200, to cover costs of lease, survey and report, &c. Messrs. LEICESTER AND CO. OFFER TO TAKE THE MANAGEMENT OF MINING COMPANIES, AND PROVIDE OFFICE ACCOMMODATION, for a percentage on the profits of the company.

For further particulars, apply to Mr. RICHARD MIDDLETON, Mining Journal office, 26, Fleet-street, London, E.C.

All remittances must be made through our bankers, the Union Bank of Australia.

### NEW PATENT ACT.—MR. CAMPIN, having advocated

Patent Law Reform before the Government and Legislature, and in the pages of the Mining Journal, &c., now ADVISES AND ASSISTS INVENTORS.

THE CIRCULAR OF INFORMATION gratis, on application to the Patent Office and Designs Registry, 154, Strand.

### THE PROGRESS OF MINING IN 1860, BEING THE SEVENTEENTH ANNUAL REVIEW.

By J. Y. WATSON, F.G.S., Author of the Compendium of British Mining (published in 1843), *Gleanings among Mines and Miners, &c.*

The SIXTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in the Mining Journal of December 31, 1859, and January 7, 1860.

A FEW COPIES of the REVIEW OF 1859, containing Statistics of the Metal Trade, the Dividends and Percentage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also A FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining offices, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

### WATSON AND CUELL'S MINING CIRCULAR.

published every Thursday morning, price 6d. or £11s. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to Investors and speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CUELL, 1, St. Michael's-alley, Cornhill. N.B. Messrs. WATSON and CUELL have made a selection of a few dividend and progressive mines, which they have reason to believe will pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

### INVESTMENTS IN BRITISH MINES.

MR. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 30TH MARCH, 1861, with Particulars of the Principal Dividend and Progressive Mines, Table of the Dividends Paid in the last Five Years, &c., is NOW READY.

Price One Shilling. At 117, Bishopsgate-street Within, London, E.C.

Reliable information and advice will at any time be given on application.

Also, COPIES of "BRITISH MINES CONSIDERED AS AN INVESTMENT." By J. H. MURCHISON, Esq., F.G.S., F.S.S. Pp. 356, boards, price 3s. 6d., by post 4s. 6d. advertisement in another column.

Plates, 8vo., cloth, price 10s. 6d., by post 11s.

### THE MINERS' MANUAL OF ARITHMETIC AND SURVEYING.

By WILLIAM RICKARD, Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 4, Myrtle-street South, Liverpool.

Truro: Heard and Son.—London: Longman and Co.; the office of the Mining Journal, 26, Fleet-street; of the author, and of all booksellers.

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### Notices to Correspondents.

\* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

Sir.—Having occasion to place an 8-horse power engine in the extreme end of a level, 200 fathoms from shaft, and which is 25 fathoms from surface, I shall be obliged by your numerous readers would inform me what size and weight per fathom the pipe for carrying off the smoke should be made? If any fan is required, and if any advantage would be gained by introducing the pipes at surface into the due of the stack of an engine worked by three boilers, of 11 tons each?—INQUIRER.

VOLCANIC ACTION.—I shall feel obliged to Mr. Mark Fryar to reply to my question in your Journal of June 22—"Where I can see the coking or calcining products from volcanic heat in iron and coal seams?" I should like to examine the seams *in situ*.—EVAN HOPKINS: Clarendon-gardens, London, W.

GOLD-PRODUCING VEINS AND ROCKS.—A few weeks ago some of your correspondents referred to the theory of Sir R. Murchison, regarding the production of gold in depth. I am unable to conceive how it is possible for any man to establish a theory maintaining that gold cannot be found or produced at great depths, and more especially when I have myself seen gold and auriferous matrix extracted at a profit at a depth exceeding 200 fms. from the surface, at Marmato. It is true that the deep gold mines are in matrix of pyrites and quartz, and that as yet no gold quartz but only pyrites veins have been found profitable at great depths. Still, no one has a right to maintain that gold cannot be produced at greater depths should the rock and matrix change. With respect to gold quartz veins, no theory can be justly established; all that we can say is, that the result of our trials in every gold district shows that hard quartz veins, without ferruginous mixture, become very poor at moderate depths. This is a fact that cannot be controverted, but neither the science of geology nor experience can form a theory as to the depth at which gold may be found in the primary rocks. However, putting theories and opinions aside, and looking at it as a pounds, shillings, and pence question, in all such undertakings in new districts, where we find only quartz and slate, and no pyrites, it would not place much dependence on great depths, but place it on the area and extension of the workings, by cross-cuts, &c., at shallow depths, and keep trial pits in advance.—EVAN HOPKINS.

ELECTRIC CALAMINE (SILICATE OF ZINC).—I should be glad to learn, through the Journal, the locality of the latest deposits of this mineral in England and Wales, what companies are raising it, and at what price it is now sold?—V. W.

ROO IRON.—We have referred the enquiry which appeared in last week's Journal to Mr. Campin, of the Strand Patent Office, and he says that there being now about 3000 entries for patents every year it is impossible to state with any certainty whether any particular matter is or is not the subject of letters patent; the only certain method of learning being to search the Indices of the Commissioners of Patents, and then to look at any specifications of patents which have "titles" at all likely to compass the subject matter of the enquiry, which can be done at the Commissioners' libraries at the Great Seal Office and South Kensington Museum, at the British Museum, or the free libraries of many of the principal towns.

ASSAYERS' BLAST FURNACE.—Can any of your correspondents inform me where the furnace, as referred to by "D. A.," in last week's Journal, can be purchased in this country, and the cost? Any other particulars relating to the subject would also be acceptable.—M. D.

THE PROSPECTS AND POSITION OF THE DEVON GREAT CONSOLS.—Knowing you are desirous that the Journal shall be the medium of correct information, I beg to call your attention to an oversight in an article which you published on "Metallic Mining, and Shareholders' Profits," which I have not yet seen noticed by any shareholder of the Devonshire Great Consolidated Copper Mining Company. On referring to the annual report of this company in the Journal, some weeks since, I find you have given occasion for conclusions being drawn wholly to the prejudice of the company. By taking one set of figures for another, it is made to appear that the stock of ore ground from which the future supplies of ore are to be derived is worth only 87,000*l.*, whereas it is worth, at the rate of 5*l.* per ton, 305,880*l.*, the stock of ore ground laid open being equal to 61,176 tons. I also find in the balance-sheet, part 2, that the machinery, materials, and stores are valued (omitting fractions) at 58,031*l.*; copper ores at surface, 22,188*l.*; the resident director's house, 3500*l.*; and the cash, bills receivable, and Exchequer Bills, 22,260*l.*—a state of things, as they say in Cornwall, "quite good enough."—AN OLD SUBSCRIBER.—This letter will, doubtless, receive the attention of the writer of the article referred to, and the necessary corrective remarks be forwarded.—ED. M. J.]

SILVER VEIN.—Several letters have been received respecting this mine. We understand that a sampling of the silver ore will take place next week, and the directors will call a general meeting of shareholders, or issue a circular, as soon as the result of the sales is known.

GREAT RETALLACK.—If it be the wish of the shareholders to have the agents' reports written up as to arrive in London on Fridays instead of Mondays, as at present, the committee can have no other desire than to meet the wishes of the general proprietary. But permit me to observe that no such wish was expressed at the last meeting, nor has any communication been addressed either to the secretary or to the committee upon the subject. If there is any blame in the matter it must attach to the committee, for not taking upon themselves to alter an arrangement which has been in force since the commencement of the company. Your anonymous correspondent complains of this, but why does he single out Great Retallack, when from the majority of mines managed in London the reports are received on Monday mornings? I am inclined to think, however, with your correspondent, that it would be as well to have them three days later; at the same time, the agents' orders are, in addition to the weekly report, to send to the office immediate notice of any particular change, and during the past week two, if not three, reports have been received.—A MEMBER OF THE COMMITTEE.

GREAT RETALLACK.—In the Journal of last week a shareholder finds fault with the mode of sending the reports. No doubt if sent on a Wednesday to the Journal it will be a great benefit to all out-advancers. It has been stated here, and I believe it to be perfectly correct, that the engine-shaft in which they have the improvement will, in a few fathoms sinking, be entirely out of their sett. The same may be said of the 35, where they have only 8 fms. to reach the boundary; and the 25 has already been communicated to the adjoining mine—Duchy and Peru, which is on the east and south boundary of Great Retallack. If Capt. Reynolds, in his next report, were to give to the proprietors an explanation of the matter, no doubt it will be very satisfactory to all to know their true position.—DUCHY AND PERU.

WHEAL EMMA.—Several letters appeared in the Journal about October last, relative to the great improvement made by Captain Robert Dunstan in the management of this mine, and the confidence with which the shareholders were inspired by the promise of so much being developed in so short a time. But I will leave all reference to representations and pretensions, and come to facts; in doing so, I will call attention to the six months' returns in Wheal Emma, under the previous management, compared with the seven samplings of Captain Dunstan, the last of which was July 16, 1861:—Quantity of ores sampled in six months, under the former management, with 40 tons left on the floors, 854 tons, realising 4295*l.*, averaging per month 715*l.* 10s. Quantity of ores sampled, deducting 40 tons as left on the floors by former manager, 1051 tons, realising 4082*l.* 2s. 10d., averaging per month 677*l.* 17s.; leaving a deficiency of cash under present management, for seven months, as compared with the previous six months, of 155*l.* 19s. per month. I shall feel thankful if your correspondent of October last would furnish me with the facts respecting the amount of dividends paid, as I have seen nothing in the Journal respecting the realisation of the 300*l.* per month, as contemplated in that remarkable letter.—J. MOYLE: Carharrack.

QUARTERLY SALES OF TIN.—In the Sales of Black Tin for the Quarter ending June, published in last week's Journal, Drake Walls Mines is only supposed to have sold 38¼ tons, realising 2755*l.* 2s. 3d. Now, during the last three months this mine has sold 55 tons 5 cwt. 1 qr. 13 lbs., for the sum of 4297*l.* 3s. Please put this in the Journal in the form of an erratum.—WM. BETTELEY: Drake Walls Mines, July 29.

WHEAL HEARLE.—In the List of Sales of Black Tin for the Quarter ending June, 1861, published in last week's Journal, it erroneously appears that Wheal Hearle sold black only once, and in April, whereas our sales for the quarter were as follows:—April, 322*l.* 6s.; May, 350*l.* 4s.; June, 365*l.* 7s.—1037*l.* 16s.; showing a steady increase in produce, and, I hope, an equally steady progress towards dividends.—JAS. HOLLOW.

[For some weeks previous to publishing the Quarterly Returns we call upon pursers to furnish us with the particulars of sales from their respective mines, that they may appear correct. The foregoing letters show the necessity of attention being paid to such request, and we trust will induce those interested to devote in future a little time to a matter of much general interest, and some importance to their shareholders—accurate statistical information. Had the returns been furnished to us when applied for these corrections would not have been required.—ED. M. J.]

## THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, AUGUST 3, 1861.

The present returns from the Board of Trade, respecting the imports and exports of the United Kingdom, are for the first half of the year, being made up to June 30. For this period the total declared value of the export of articles the produce and manufacture of this country is set down at 60,143,425*l.*, which, against 62,019,989*l.* for the six months of 1860, is a decrease of 1,876,564*l.*, while as compared with 1859, when the aggregate was 63,003,159*l.*, the difference is 2,859,734*l.* For the month of June, however, taken by itself, there is an increase over June, 1860, of 1,026,439*l.*, the difference between 10,362,893*l.* and 9,236,454*l.*

The several heads of exports more particularly representing mining industry, show a falling off for the six months, with only two exceptions, which are coals and culm, and machinery, the former giving an increase of 183,809*l.*, and the latter 213,153*l.* After allowing for these two amounts, we find the total decrease is 709,644*l.*, the aggregate value for the six months of 1861 being 12,451,388*l.*, against 13,161,032*l.* in 1860. The heaviest deficiency is in copper, which is less by 359,155*l.* than last year. The next is tin, to the extent of 292,717*l.*; iron, 292,119*l.*; lead, 83,424*l.*; steel, 59,219*l.*; hardware and cutlery, 17,164*l.*; and brass, 2808*l.*

Referring to the balance-sheet of our interchange in the precious metals with other nations, it appears that we have exported no less a sum than 14,081,068*l.*, against only 9,627,670*l.* imported. Of the exports, 5,801,490*l.* was silver, and 8,279,578*l.* gold, while the imports consisted of 5,973,798*l.* gold, and 3,653,872*l.* silver. To Egypt, for India and China, we transmitted 5,044,456*l.*, against 3151*l.* only received. To the United States we exported 5,948,623*l.*, and our imports thence were 53,086*l.* From France we obtained 2,043,520*l.*, and sent 1471,906*l.*, so that in this instance the balance is in our favour. From Mexico and South America we obtained 3,396,674*l.*, without any remittance of any similar kind from this country; from Australia we imported 3,092,278*l.* on the same terms.

The French Official Returns for the first half of the present year present some very important results. In the first place, the amount of the duties received on imports during June is rather over 9½ million francs, against a little less than 12 last year, and more than 18½ in 1859; the total is, in fact, some 26,000 frs. less than it was in the same month two years ago. Taking the six months, the diminution is, however, considerably less, the amounts being, in round numbers, 55½, 63, and 95½ million francs. A great portion of this deficit is the result of legislation, and the sum lost does not exhibit any falling off in commercial prosperity, but principally an improvement in commercial legislation, which must eventually be highly remunerative to the nation. The following particulars will interest our readers:—Coal exhibits a great increase, the total being 50 per cent. more than last year; but while the supply from England was four times greater, that from Belgium was less. The new product, "jute," reached upwards of 17,000 quintals, of which all but 3000 came from England or British India. The import of machinery was very large, the value being set down at 895,466 frs. against 237,212 frs. last year. One of the most remarkable results, however, is the import of pig-iron. The figures stand thus:—

	1861.	1860.	1859.
England .....	76,771	3350	met. quintals.
Belgium .....	11,368	3110	"
Other places .....	38,698=126,735	1583=5043	"

Bar iron shows an increase from 229 quintals to 2831 quintals; and steel from 211 quintals to 1268 quintals. In copper there was a large increase, with a falling off in English. Iron manufacturers from England seem to be making a market, for we find that out of 1037 quintals imported 722 quintals were cleared, while from 2210 quintals coming from other places, only 383 quintals paid duty and entered into consumption during the month. If this be one of the results of the tariff—or, rather, if this be not an exceptional case—it is a very important one.

### MINERAL WEALTH OF THE UNITED KINGDOM.

The Statistics of the Mineral Produce of the United Kingdom for 1860 are highly favourable, as compared with the preceding year. Notwithstanding the depressed state of commerce generally during the entire period reported upon, the quantity and value of minerals and metallurgical manufactures has continued to increase, showing, in a very marked manner, the stability of these branches of industry, and their invariably progressive character. The value of the minerals produced from British mines has increased to the extent of 2,177,933*l.*—the amount being 26,226,526*l.* in 1860, against 24,226,526*l.* in 1859. It is probable that at no period since mining enterprise has been carried on in this country has the progress made been equal to that which has taken place since the recognition of its importance as a national industry by our legislators in the establishment of that useful institution so ably presided over by Sir Roderick Murchison; and it may very fairly be questioned whether this progress is not in a great measure due to the compilation and publication of statistics, which enable the public to learn, upon reliable authority, that the returns accruing from mining adventure are immense. Through the courtesy of our valued correspondent, Mr. Robert Hunt, F.R.S., we are enabled to publish this day an abstract of the Statistics, which he has just completed, and which will shortly be ready to issue to the public in the customary form.

The following general summary will show the position maintained by our mineral industries during the year 1860:—

### GENERAL SUMMARY, OF WHICH RETURNS ARE GIVEN FOR 1860.

Minerals.	Quantity.	Value.
TIN .....	10,462 .....	£ 748,827
COPPER .....	236,696 .....	1,507,133
LEAD .....	89,081 .....	1,236,749
SILVER ORE .....	125 .....	2,439
ZINC .....	15,552 .....	39,631
PHYTES .....	135,669 .....	84,139
ARSENIC .....	1,600 .....	12,800
NICKEL .....	6 .....	254
TUNGSTEN .....	19 .....	19
MANGANESE .....	932 .....	3,096
SUNDRIES, OCHRE, &c. ....	597 .....	869
IRON ORE .....	8,024,205 .....	2,466,929
COALS (sold and used) .....	80,042,698 .....	20,010,674
SALT .....	1,570,972 .....	221,150
CLAY .....	508,666 .....	9,750
BARYTES .....	13,354 .....	60,000
COPROLITES .....	30,000 .....	60,000

Total value of minerals and coals ... 90,680,634 ... £26,404,459

### METALS PRODUCED FROM BRITISH MINERALS.



1859, 850,452; increase 15,854. The apparent discrepancy between the returns for the years ending at December and September arises from the fact that the returns include the last quarter of 1859, which was a very productive period. The values of the ores of tin in these years—1859, 807,582; 1860, 748,827; decrease, 58,755. 1859, 738,488; 1860, 812,160; increase, 73,672. Our imports of block tin, &c., in 1859, were 54,006 cwt.; ditto, 1860, 58,220 cwt.; showing an increase on imports of 4214 cwt. Our exports of unwrought tin in 1859 were 56,079 cwt.; ditto, 1860, 54,799 cwt.; exhibiting a decrease on exports of 1280 cwt.

**COPPER.**—The production of copper from the mines of the United Kingdom was—Ore: 1859, 236,789 tons; 1860, 236,696; decrease, 93 tons. Fine Copper: 1859, 15,770 tons; 1860, 15,968 tons; increase, 198 tons. The money value of the ore and copper produced being in—Value of Ore: 1859, 1,506,835; 1860, 1,507,133; increase, 298. Fine Copper: 1859, 1,734,700; 1860, 1,706,261; decrease, 28,439. If to this be added our importations we have the total value of copper smelted in this country as—in 1859, 3,588,540; against in 1860, 3,446,398; or a decrease of 4214 cwt. Our exports of all sorts of copper—in 1859, 22,788 tons; in 1860, 26,166 tons; showing an increase of 3378 tons.

**LEAD AND SILVER.**—The lead ore produce of 1860 shows a falling off, as follows:—Lead ore, 1859, 91,381 tons; 1860, 89,081 tons; decrease, 2300 tons. Lead: 1859, 63,233 tons; 1860, 63,525 tons; increase, 292 tons. Silver: 1859, 676,027 ozs.; 1860, 549,720 ozs.; decrease, 26,307 ounces. The market value of the lead and silver in these two years was as follows:—Lead: 1859, 1,405,925 tons; 1860, 1,417,415 tons; increase, 11,490 tons. Silver: 1859, 158,407; 1860, 151,174; decrease, 7234. We imported in 1859, 23,620 tons lead, worth 504,396; 1860, 22,171 tons, worth 468,435; decrease, in tons, 1449; in value, 35,961. We exported of lead as follows:—Pig and rolled: 1859, 18,414 tons; 1860, 21,986 tons. Shot: 1859, 2157 tons; 1860, 1811 tons.

**ZINC.**—The quantity of zinc ore, chiefly blende, raised in the two years under consideration were:—1859, 13,039 tons, worth 39,117; 1860, 15,552 tons, worth 39,631; increase in production of ore, 2513 tons, in value, 514. Our importations of zinc during the same period being—in 1859, 36,303 tons; 1860, 28,784 tons; decrease, 7519 tons. Our exports of the same metals being:—British: 1859, 4874 tons; 1860, 5271 tons; increase, 397 tons. Foreign: 1859, 8671 tons; 1860, 4211 tons; decrease, 4460 tons.

**PYRITES.**—The production of sulphur ores (iron pyrites) was 135,669 tons in 1860, it being 136,060 tons in 1859. Of arsenic, manganese, and the less important mineral productions, the quantities are given in the general summary.

**IRON.**—The manufacture of iron has continued in a very uncertain state throughout the year. Notwithstanding, however, the unsettled condition of this important industry, we find there were no less than 582 furnaces in blast during the year, from some of which the enormous quantity of 400 tons of pig-iron were made in a week. The relative positions of the two years may be represented as follows:—British iron ore consumed in 1859, 7,876,581 tons; 1860, 8,024,205 tons. Foreign iron ore, ditto, 1859, 29,328; 1860, 23,112 tons. Pig-iron made, 1859, 3,712,904 tons; 1860, 3,826,752 tons. Value of pig-iron (at the place of production) 11,480,256. This year a more complete list than any which has previously been given of the mills and forges of the United Kingdom is included, and also of the tin-plate works of South Wales. This is not to be regarded as entirely complete, but it is hoped the form in which this information is given being known, that in future years there will be greater facilities afforded for obtaining a full representation of our iron manufactures. The fulness of information communicated by the owners of blast-furnaces renders the return of pig-iron especially reliable.

**COALS.**—The production of coals keeps pace with the increase of population, and the enlarged demands of our manufactures and commerce. In the general statement a full view of the progress of the coal trade is given. It is only necessary here to explain that according to the computation made on the system adopted for some years past, the coal produce of the United Kingdom was, in 1860, 80,042,698, as compared with 71,979,765 in 1859. Attention is, however, directed to a largely increased estimate of the production of the Durham and Northumberland coal fields, made by the Inspectors of that district. It will be seen that their computation is nearly 4,000,000 tons more than the amount given. These gentlemen show, and perhaps correctly, that the quantity put down for colliery consumption, which quantity was estimated with the assistance of the late Mr. T. J. Taylor, has been considerably below the actual amount; but the large excess arises from an item which has never been included in these returns—the quantity of small coals destroyed by burning upon the waste fire heaps of the collieries. If those items be admitted, it will be seen that the actual drain upon our coal fields has now advanced to, and is proceeding at the enormous rate of, 84,042,698 tons per annum. A complete list has been given of our exports from each coal field during the year, showing the ports to which the fuel was sent. The total exports to foreign countries for the last three years were—in 1858, 6,529,483 tons; 1859, 7,081,949 tons; and in 1860, 7,412,575 tons.

#### NORTHERN INSTITUTE OF MINING ENGINEERS.

Since writing the remarks on the paper of Mr. Aytoun "On Safety Cages," we notice that the report of Mr. Dunn gives some particulars respecting shaft accidents. The total number of deaths from shaft accidents, as stated by Mr. Aytoun, in the year 1860 was 182, and in 1859 the number was 191. Of these 5 occurred from over-winding and 22 from the breaking of ropes and chains—that is, about 12 per cent. of the shaft accidents are due to this cause; the remainder are due to various causes, such as falling from the top of the shaft, materials falling down the shaft, &c. Now, all these accidents, it would appear, are from causes not very difficult of prevention, if we consider that in Northumberland and Durham and Cumberland, only 23 deaths occur in shafts, and in the other districts the number of lives lost is 159, although in the former districts more than one-fourth of the total amount of coal raised is got, so that if all the districts were in the same proportion only 92 deaths ought to have occurred, instead of 182. To return to Northumberland and Durham: in 1860 we hear no case of over-winding, and only one case of life being lost by the breaking of ropes, and this is an exceptional case, which occurred at Meddlesley, from the rope having been allowed to get slack under the drum, and so falling over the horns; the rope was broken, and we think, three lives lost, although in the table given we have only one life lost, which would appear to be an error. Looking at these facts, we can scarcely avoid making the inference that the present practice in those two counties very nearly approaches to the best that can be made, that is, so far as the safety insured from the breaking of ropes and chains, and from over-winding, is concerned. But it is a very grave subject, and we should be loath indeed to come to any rash conclusion on it. A very large number of people are conveyed into and from these mines each day, and the shafts are many of them of great depth; the speed at which they are conveyed is great, so that it is impossible almost to hope that accidents from breakage and over-winding can always be avoided with the present arrangements. Looking at all these points, if an apparatus at once simple and effective can be had, it might possibly be the best course to adopt it. With respect to the other shaft accidents specified in the summary, 38 occur from falling into the shaft from the surface, and 17 occur from things falling down the shaft. Both these classes of accidents ought not to be difficult of prevention—movable covers at the top of the shaft, already adopted in many cases, would certainly prevent the former; and covers to the cages, which are provided for by the Act recently come into operation, will go far to prevent the occurrence of the latter.

Mr. T. Y. Hall's paper is of a very comprehensive character, and possesses many points of special interest. At present we shall notice mainly the position of the coal trade in the Tyne, as pointed out by him. He appears, indeed, to have attached especial importance to this part of the subject. This is the district marked D on the large map. The area of this district he estimates at 162 square miles, and as he shows it contains a great variety of coal, the most interesting portion being the remains of the High Main seam—the finest household coal in the world. The total quantity of coal remaining here, including the remains of the High Main, he estimates at 1400 million tons—a quantity equal to all the steam-coal in the districts A, B, and C. The greatest portion of this coal is now inaccessible from water, and it was to rescue this valuable portion of the coal field that the drainage scheme of the late lamented Mr. Taylor was matured, but which he did not live to see carried out. Mr. Hall lays great stress on the improvement of the River Tyne, and there are certainly good grounds for this as a very slight examination will show. He estimated in 1855 the total coal raised in Northumberland and Durham at 16½ million tons, and h

now estimates the quantity raised at 22½ million tons, so that a very satisfactory increase has taken place. But if that is the aggregate increase we think that the Tyne will not have borne her full share in this increase; the reason being found in the want of docks of a suitable depth of water for the reception of large ships. That the steam-coal trade has been much retarded in consequence of this cannot be doubted. The best steam-coal in the North is to be found in Northumberland. This is the only coal capable of competing with the best steam-coal of South Wales. But it cannot do this unless access is afforded to deep-water docks for its shipment. The house coal trade to London has also fallen off, and the only cure for this appears to be the drainage of the collieries containing, in pillars and barriers, as shown by Mr. Taylor, an immense quantity of excellent house coal. If the Tyne is to keep her position in the race the achievement of these objects appears to be imperative; by no other means can it be done. The best house coals in the Wear, too, must be rapidly exhausted, and should they fail to supply the demand, the further falling off in the London coal trade would be unavoidable.

#### GOVERNMENT MINE INSPECTION.

**DERBYSHIRE, NOTTINGHAMSHIRE, LEICESTERSHIRE, AND WARWICKSHIRE DISTRICT.**—Mr. Hedley gives his usual statistics, showing the number of tons of coal raised for each death, the result being far less favourable than in the preceding year, though somewhat better than in 1858. Like the other Inspectors, Mr. Hedley has observed the ill effects of want of discipline. The lack of good discipline, he says, has been prominently and painfully manifested to him during the past year, his list containing the names of many who have sacrificed their lives by very careless and daring acts, and some of them men who held responsible places, and men of experience as well. The old special rules have been revised to meet the requirements of the new Act, and were at the date of his report established at the principal collieries in his district, and the other collieries were taking steps to establish them forthwith. Henceforth there will be only one code throughout his district, and by that more vigilant supervision is provided for, which he trusts will materially reduce the number of deaths which annually arise from breaches of discipline. Mr. Hedley has the satisfaction of recording the escape from a very serious explosion of gas at the Shipley Hard Coal Colliery, Derbyshire, by the proper use of safety-lamps. In November last a well-ventilated district in the colliery was for several hours charged to an explosive point—the Davy's were full of flame, and the Geordie's or Stephenson's extinguished; but the men safely reached the intake air-course and escaped. One man had to pass over the coals for 60 yards along the face with his Davy full of flame, and as the seam was only 3 ft. thick the risk was evidently great. Mr. Hedley remarks that had the man tripped, or the lamp jerked with sufficient force to pass the flame through the gauze, an explosion involving the loss of some 70 lives would have been added to the list of explosions not accounted for; and a defective lamp, or the exposure of a light, would have been suggested as the cause of the catastrophe.

**COMPULSORY EDUCATION IN COLLIERIES.**—It appears that some difference of opinion exists with respect to the feeling entertained in the Bristol district concerning the desirability or otherwise of introducing compulsory education, and Mr. Handel Cosham now formally contradicts the statement made by one of the Assistant Commissioners on Education relative to the Bristol collieries being in favour of the compulsory system. Mr. Cosham feels such a statement has no foundation in fact. In a lecture on the "Present State of Education," Mr. Cosham remarks:—"There are two points connected with the Report on Education upon which I feel called upon to say a few words; and, first, I see Mr. Cummin, the Assistant Commissioner for the Bristol district, has stated that the collieries round Bristol are in favour of a compulsory attendance at school—that is, they are in favour of a law to compel them to send their children to school. Now, I beg leave very respectfully to question the correctness of that opinion, and I think my knowledge of the wants and wishes of the Bristol collieries is, to say the least, quite equal to that of Mr. Cummin, and I am sure I speak correctly when I say that among no considerable number of collieries in this neighbourhood is there the slightest desire for compulsory education, but, on the contrary, a strong and decided objection to its adoption; and sure I am that, if once attempted, it would put back and retard the progress of education more than almost any other step that could be taken, and I must denounce the adoption of the Prussian system of compulsion as dangerous and unnecessary. Secondly, Mr. Cummin has also stated that there is only one good voluntary school in the Bristol district, and that is the 'Friends.' That statement I also venture to challenge, and I am quite sure that I can point out a very considerable number of voluntary schools in and around Bristol supported on the voluntary principle, equal, if not superior, in every respect to similar schools in similar localities patronised and assisted by the State; and I cannot but express my deep regret that Mr. Cummin should have thus stepped out of his way to insult those whose labours for the promotion of education have been constant and successful, and whose sincerity has been abundantly proved by the sacrifices they have always been ready to make for its promotion."

**PRACTICAL MINING—COBBING.**—Messrs. Smyth and Wasley, of Coed Mawr Pool Mine, whose invention for improvements in crushing ores was the subject of so much controversy in our pages some time since, have recently specified their invention (per Mr. Campin, the patent agent). The specification states that the invention consists in the use and adoption of a bed or place to receive the ores or substances to be crushed or broken, made of cast-iron or other suitable substance, with steel (or steels) bars on the top, or perforated plates of different sizes, according as the nature of the stuff may require, which stuff will discharge under the bed or bars as it is broken. Any form of bars or perforated plates may be used for the breaking of ore, stuff, stone, or any other hard substance. And the inventors do not confine themselves to steel-bars, as any other material may be found to answer; or, in other words, instead of having a bed or crushing-floor of solid metal or other suitable substance, the inventors form a strong grating or surface, composed of bars and openings between them, upon which bars or grating the ores, stone, or hard substances are pushed or placed beneath the stampers (which they prefer to make use of a lift for the stampers in the native barrel to take into any life the stampers, instead of leaving a lifter, tongue, or projection attached to the stampers lifted by the said first-named tappet or tongue, as in the old plan), and which stampers or other crushing or breaking-up mechanisms are arranged to act upon the said bed, in any manner known and practised by mechanics. The ores, stones, or other hard substances will, upon sufficient force being applied thereto, be crushed or broken upon the bars or solid parts of the grating or open-work (such as are of steel or are steels at the edges), and the ore, stuff, or stones, or hard substances considerably reduced in size, and are pressed by the action of the stampers or crushing mechanisms through the apertures between the bars or the open spaces of the grating to beneath the surface of the said bed, where it is preferred to receive the same on inclined surface, for the crushed stuff to fall upon, such surface being provided in a supporting framing for the aforesaid bed, which surface will cause the crushed stuff to run down upon a grating or sifter, so that the finely-broken or crushed parts roll forward beyond such finely crushed parts, causing a separation, which large parts may be again crushed or broken upon another bed, which has more numerous bars or solid parts and smaller openings between them, so as to reduce the ores or hard substances still further, which crushing upon different beds may be repeated as often as may be found requisite. The invention as described is claimed as new, not including the parts taken separately and apart from the purposes thereof.

**NEW PATENT STEAM-GAUGE.**—An improvement upon the ordinary steam-gauge has recently been invented by Messrs. Bailey and Co., of the Albion-works, Salford, which for simplicity certainly appears superior to any similar instrument which has been introduced, and which, from its principle of construction, is not at all liable to derangement. The outward appearance of the gauge is that of the ordinary Bourdon, but the interior construction differs very widely—springs, mercury, compressed air, and all that is objectionable in existing gauges being entirely dispensed with, the substitute employed being nothing more than a simple weight. Within the circular box upon which the dial is placed, and near its centre, there is provided an axis from which a pendulous weight in the form of the segment of a circle is suspended. Whilst at rest, and not acted upon by the steam (the pressure of which is to be indicated), a cycloidal lever or projection extends in a horizontal direction over a rod which is supported upon the centre of a diaphragm, in direct communication with the steam in the boiler. Upon the pressure of the steam increasing the diaphragm is acted upon, and the connecting rod is forced upwards, acting in turn upon the cycloidal lever before referred to. The tendency of this action is naturally to raise the weight from the vertical to the horizontal position, and as a toothed wheel upon the axis from which the weight is suspended gears into another toothed wheel upon the axis which carries the pointer, the pressure of the steam upon the diaphragm can be accurately indicated upon the dial. The gauge was exhibited at the Manchester Exchange, on Tuesday, and very generally approved; we understand, moreover, that the instrument is warmly encouraged by Mr. Peter Henson, the Government Inspector of Coal Mines, and that it has already been adopted by Messrs. Kirkless Hall, Ince Hall, and Rose Bridge Coal Companies, and almost without exception by all the coal companies in the neighbourhood of Wigan and St. Helen's.

**FURNACES.**—Instead of constructing furnaces for steam-boilers, &c., in the ordinary manner, and instead of charging them with fuel as usual, Mr. B. Hockin, of Limehouse, declares that he is, by means of an invention which he has recently provisionally specified, enabled to combine fuel-economy with the smokeless combustion of bituminous coal, and, at the same time, secure a supply of feed-water heated to as high a temperature as may be required, or as can be pumped or otherwise fed into a steam-boiler or other close vessel. He divides the furnace longitudinally with a hollow iron box or case, which is made to extend from the bridge or any point behind it to the front of the dead plate, or as near to the furnace-doors as will permit of the escape of the products of combustion from one side of the furnace to pass round the front end of the hollow case or longitudinal division, and so pass over the entire length of the other half of the furnace. This hollow case does not form part of the boiler, but may rest upon bearers suitably placed. Along each side, as near the top of the case as may be convenient, one or more rows of holes may be drilled to permit of the escape of steam when required, as in the case of a boiler, and in case of necessity, for readily extinguishing the fire. Into this hollow case or longitudinal division cold water is pumped or permitted to flow to any desired level, and in proportion to the quantity required or the temperature to

which it may be required to be raised, either for feeding the boiler or for any other purpose for which it may be needed, and the water is either permitted to overflow into another vessel from a pipe placed at a convenient height, or it may be pumped direct therefrom or fed in or discharged by means of an injector. Behind the bridge, which is divided into two parts in width, and which may either be of fire-brick, supported in an iron frame, or constructed of any other material, he places a vertically sliding damper or shut-off plate to each division or portion of the furnace, and by means of levers and connecting-rods he is enabled to close or shut-off the direct communication between either of the furnaces and the fire, so that whilst the one division contains fuel in a bright incandescent state, the gases distilled off from the green fuel charged into that furnace are caused to travel forward instead of going direct into the fire; and after passing to the front of the furnace, and round the end of the longitudinal division, are made to pass over the incandescent fuel, where they become ignited and add to the total heat, giving power to the fuel. When the fuel last charged has become thoroughly coked, and the other furnace requires replenishing, the arrangement of the dampers is reversed,—that which was previously closed is now opened, and the direction of the gases in a corresponding manner changed.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

**NEWPORT, CARDIFF, AND SWANSEA, AUG. 1.**—The reports of Mr. Evans and Mr. Brough, the Government Inspectors, throw considerable light on the working of coal mines in Monmouthshire and South Wales. Mr. Evans' report is characteristic of brevity and point, and in treating of the accidents which have occurred in his district, he spares neither master or workman in his excellent censures. This has given great satisfaction throughout South Wales generally, and increased confidence in the Government Inspector will be the result. In Mr. Brough's district one of the most fearful colliery accidents on record took place last year, by which 142 persons lost their lives. The calamity occurred at the Black Vein Pit, the property of the Risco Coal and Iron Company, and full reports of the accident and inquest appeared in the *Mining Journal* of the following weeks. Mining engineers of repute and standing were called to the spot to offer their opinion as to the cause of the terrible catastrophe, and Mr. Evans and Mr. Brough, amongst others, were examined. The general impression was that a blow of gas caused the explosion, and Mr. Brough reiterates this opinion in his report, and makes some valuable comments on the probable cause of the explosion, and colliery engineers and viewers cannot fail to derive much benefit from his perusal. It would have been, however, more satisfactory to have seen a definite opinion of some kind. He shows at some length that if the Inspector gave a definite opinion of some kind, he shows at some length that there were several defects in the management and working of the colliery, which might have caused the explosion, but at the same time he does not think, judging from all the surrounding circumstances, that this mismanagement actually caused the catastrophe under notice. No doubt it may be difficult to offer a distinct opinion, yet the public would be better satisfied if the Inspector or any of the mining engineers present at the enquiry could give a more definite idea of the cause of this terrible sacrifice of human life. The state of trade in the different parts of the district remains about the same. In the neighbourhood of Swansea things appear to be improving, and several of the tin-works which have been at a stop for many months are about to start afresh. The Morfa Tin-Works commenced working on Monday, and others are expected to follow the same course within the next few days. The Youngsduffy Works are going on slowly, whilst much activity prevails at Ystalyfera. At Cardiff there has been a goodly number of arrivals, but there is no improvement to note. The Newport docks and wharves are pretty fairly occupied, and several large ships are now loading coal and iron. It is satisfactory to state that the strike is at an end at the Varteg and Glynolwyn Works. The men, after standing out for about a month, have gone in at the reduction of 2d. per ton, and it is to be hoped that all will go on peacefully now. The masters have lowered the price of provisions in the company's shop, which is the only advantage the men have gained through the strike.

**THE INUNDATION OF THE MARSH COLLIERY, LLANRHIDIAN, NEAR SWANSEA—TWO MEN DROWNED.**—We have already stated that the Marsh Colliery, situated in the peninsula of Gower, was suddenly inundated on the night of June 5, by the workmen striking into an old heading, and that the only two men in the pit at the time were drowned. Nearly two months have been occupied in clearing the pit, in order to allow the Government Inspector for South Wales, Mr. Thomas Evans, to make his official report. That having recently taken place, the inquest upon the bodies of the deceased was held on Tuesday last, before Mr. C. Collins, coroner, at the Welcoming-to-Town Inn, Llanrhidian. The true facts of the case never having been laid before the public, we here give them as deposited before the coroner:—William Harry identified the bodies, and proved that the Marsh Colliery belonged to Messrs. Perkins, Morgans, and Co., of Llanelli, who were generally known as the Lynch Colliery Company.—William Jenkins, a collier, deposed that he had worked in the colliery for about two years, and was working underground the night before the water broke in. The colliery seemed to be quite safe when he left it. As he was leaving both of the deceased were waiting to go down the pit.—George Richards, a bankman, deposed that he had worked in the Marsh Pit for about nine months. On the morning of June 5, about half-past nine, he heard a report of the bursting of a boiler, and within half a minute the pit was filled with water. The two deceased went down the pit at the usual hour that morning. Nobody else was in the pit at the time.—John Davies, of Llanelli, deposed that he was working in the pit just before the accident. The heading where he was working was to the west of the pit, and water was coming down from the top, between the coal and the roof. He was working about 80 yards from the bottom of the pit. The water did not come down in such a quantity as to alarm them. He came up out of the pit about six o'clock in the morning. He got wet during the night, and was obliged to change his clothes when he came out. The deceased man Francis was the contractor for clearing the bottom of the pit, and witness worked in company with him about a fortnight before the accident. G. Edwards, the overman, was down the pit in the day time, but witness did not know why. He saw Edwards down the pit again on the Saturday before the accident. Did not hear him say anything about the works. The night before the accident they were cutting the bottom of the pit, and he left when it was cut through. There were no "bore-holes" on the face when I left the colliery. The deceased Francis told me on the morning of the accident that there was no need of more boring, as the pit was above high-water mark. A few days before the accident we left off boring, and since the boring ceased the level has been driven 5 or 6 yards. We left off boring believing we were safe.—John Davies, the above-ground agent, proved that they commenced opening the Marsh Pit in Sept. last, and that it had not been worked before for many years.—George Edwards, the underground overman of the Lynch Collieries, said that he had been down the Marsh Pit upon an average twice a week since April last, when he was appointed the overman. Saturday, June 1, was the last time he was down in the pit before the accident. He then told the deceased Francis and a man named Davies that they must go on boring. He told them this because he saw no bore-holes on the face of the level. There was some water then dripping from the roof. The water must have come from some old workings. He was sure he told them not to go on working without boring.—Mr. Thomas Evans, the Government Inspector for South Wales, deposed: On Tuesday, July 23, the Marsh Colliery having been cleared to allow an examination, I proceeded down the level to the point where the level strikes into the old works. I found a pillar of coal between the level and the old works. The head was worked away to within 6 inches or 1 foot of the place where the water broke through. This was too weak to resist the immense body of water which had accumulated in the old works. If there had been bore-holes in advance of the levels the water would have been let off, and this accident would not have occurred. The water had carried away about 3 feet square of the pillar.—This was the whole of the evidence, and the jury, after a short consultation, returned a verdict to the effect that the deceased had been drowned in the Marsh Pit, caused by a sudden eruption of water from the old workings, and that such sudden eruption of water was caused by the incautious working of the level by Thomas Francis, one of the deceased.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

**AUG. 1.**—If any change in the Iron Trade can be recognised, it is a slight degree of improvement, but it is so faint as to be scarcely worthy of notice, and is confined to very few firms. The strike of puddlers in South Staffordshire is almost at an end, the men having gone in at the reduced rate. In North Staffordshire some local strikes continue to disturb the relations of masters and men. Mr. Samuel Griffiths has purchased the works at Oldbury, previously in the hands of Messrs. Chapman and Granger, who are now bankrupts, and there are reports that he is contemplating another and much more important addition to the number of iron works now in his possession.

The report of Mr. Lionel Brough, who had charge of South Staffordshire and East Worcestershire for the greater part of 1860, is pregnant with valuable suggestions tending to the reduction of the fatalities which attend colliery operations in that coal field. It is satisfactory that many of his suggestions having reference to the prevention of accidents in shafts have been met by anticipation by the provisions of the Act of last session, and by the new special rules framed under it. Accidents are necessarily uncertain, and the rate in any single year can scarcely be regarded as a satisfactory indication of the degree of caution and prudence exercised, but it will be disappointing if accidents in shafts do not show a diminution in the present as compared to last year; and it may be hoped that in other classes of accidents a diminution may be found to have resulted from the increasing precautions and supervision exercised in the working of coal mines. All reports concur in ascribing many accidents to the want of that caution, and guard against sources of danger which result from the workmen generally being imperfectly educated. By this it is not meant that the ability to read and write, or the possession of a certain amount of knowledge, would have much direct effect in inducing greater prudence, but it is to that mental training which must accompany any efficient course of school instruction which makes men appreciate more forcibly the liability to contingent danger, and the value of precautions, the necessity of which is shown by extended experience. With unthinking and unreflective men, past impunity induces recklessness, and it is only men who have in some way or other been led to base their conduct on an extended experience that precautions involving trouble will be regularly observed. To a man of reflective disposition it appears almost incredible madness that men who work in mines exposed to exhalations of inflammable gas should smoke, or resort to cunning schemes in order to open their lamps; but to men to whom the present is all, and whose hold of the past or the future is feeble, a momentary gratification, or the avoidance of present inconvenience, readily overcomes regard for prudential considerations. Unfortunately, in South Staffordshire this imprudence of the workmen is only very slightly counteracted by the supervision of their employers, as there are the butties who, taking contracts as low as they can, naturally feel a stronger desire to get work done than to adopt precautions which they hope will not be needed. An educated body of workmen would not work in the absence of due precaution for their safety, and would certainly not neglect, or allow others to neglect, any wise provisions imposed by those set over them. A dreadful instance of recklessness, resulting in loss of life, occurred at Chesterton, in North Staffordshire, recently. A boy, named Thomas Galley, employed as hooker-on at the White Barn Colliery, at the bottom of a shaft which was 100 yards in depth, actually ascended by the chain which he held in his hands, with no other object than that which he stated to the bankman as he came in sight of the top, "that he wanted to see what sort of day it was." Scarcely had he said the words than he loosed his hold, was precipitated to the bottom of the shaft, and was of course killed on the spot.

A fatal accident occurred last week to a young married woman, named Ann Williams, who was killed by falling down a shaft at the Priestfield's Colliery of Messrs. Ward, near Wolverhampton. The shaft was 100 yards in depth, and the woman, who was leaning as she shouted down the pit, and, being insecurely fastened, it gave way, and she fell to the bottom. The deceased's husband was near at the time, and saw his wife fall; and he told the coroner's jury that, from enquiries he had made, he was



satisfied the hanksman had properly fastened the chain before leaving the pit, and that some one must subsequently have been meddling with it. It may be well questioned whether a chain hooked at one end is a secure fence for a shaft. Such a fence is liable to be slack, and thus to be below in the middle, whilst the fastening is easily tampered with.

#### REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

AUG. 1.—The causes which have led to the depression of the Iron Trade still continue, and considering the position of commercial affairs generally there is no immediate prospect of any improvement. The approaching harvest is likely to be abundantly fruitful, and the money market is becoming easier, but the demand for all descriptions of iron is very limited.

The Coal Trade is duller than it was a fortnight ago, and prices are generally lower, except for those kinds adapted for locomotive and marine purposes. There has been held this week the anniversary of the Institution of Mechanical Engineers, at Sheffield, under the presidency of Sir William Armstrong. The Chairman, in his opening address, traced the progress which science had made in the machinery of war, and he believed that whatever thickness of iron was used in ships, guns would be constructed capable of destroying it. He believed that plates made of rolled iron would be more effective in resisting shot than those forged. Mr. Henry Bessemer read an interesting paper "On the Manufacture of Steel." He said the Bessemer steel was exceedingly suitable for ordnance, and blocks of metal of any required size, from 20 to 30 tons weight, might be made at the works much cheaper than previously. Its power of resisting a tensile strain was 15 tons per square inch above the best English bar-iron. The metal had been successfully applied in the manufacture of locomotives, and such like, girders, bridges, viaducts, &c. Mr. J. Brown read a paper "On Steel Rails, and Armour Plates." He said that he considered the most practical method of giving greater durability to the working surface of the rail was to case-harden it. The process might be considered expensive, but there were certain portions of the line which might be laid down with economy. Mr. T. E. Vickers, of Sheffield, read a paper "On the effects of the Combination of Carbon with Iron." He said the result of trials had proved that iron was increased in tensile strength by the addition of carbon until it combined with about 1½ per cent., at which point it would sustain about 60 tons per square inch, but after that it became gradually weaker, until it reached the form of cast-iron. The members in the course of the day visited several manufactories, Messrs. Naylor, Vickers, and Co.'s being the first visited. Here they witnessed an experiment to test the strength and toughness of a disc railway wheel, and as the company left the works the set of steel bells, for the manufacture of which the firm has become noted, were rung. They next visited Messrs. Bessemer and Co.'s works, where the process of manufacturing cast-steel was practically illustrated. The next firm, and last visited on Wednesday, being the Atlas Works, where they witnessed the process of rolling armour plates. The great extensions which are being made for the manufacture of these plates will make this firm one of great magnitude. The meeting of the Institution was continued to-day (Thursday).

The work of clearing the pit at Clay Cross of the debris which was occasioned by the late inundation has been continued since our last, and the workings have been so fully explored as to leave no doubt as to the cause of the accident. To-day the adjourned inquest has been held at Clay Cross, when the engineering evidence was received. According to the evidence, the colliery plan showed that there was a solid pillar of coal from the stall to the breach where the water inundated the pit. Mr. Binns made the plan of the deep workings in No. 1 pit, which were commenced in 1838. The old plan of the deep workings had been lost. A new survey of the pit had been made, and the surveys had been proved to agree, but the direction which this stall had taken had never been recorded on the plan. A former overseer, named Thomas Martin, who is now dead, and who had had the management of the old workings, had driven far beyond the boundary of the old pit, in the same direction which was being worked in the new pit, and instead of there being a pillar of about 43 yards of coal, as was believed according to the working plan, there was only four feet to divide the stall which was being worked and a body of water estimated at 4½ million gallons. Mr. Woodhouse, Mr. Jeffcock, of Derby, Mr. Bean, of Alfreton, and Mr. R. G. Coke, mining engineers, were respectively examined, and they all concurred in the opinion that, supposing there had been a pillar of coal, as was believed, borings would not have been necessary. The inquest was adjourned until Friday, when the evidence of Mr. Hedley, the Government Inspector, would be taken, after which the coroner would sum up the evidence, and the jury would return a verdict.

There is nothing worthy of note this week with respect to the Derbyshire lead mines. The depressed condition of trade, owing to the American crisis, is operating against speculation, particularly in Sheffield, from which town most of the capital employed in progressive mining has been furnished.

On Saturday, as a fall of coal was being blown down at East Gawber Colliery, near Barnsley, a feeder of gas ignited, and the coal caught fire. The steward and fireman immediately commenced building stoppings, when a second explosion took place, and seriously injured both the hands and face. The managers and stewards of North Gawber and New Gawber promptly rendered advice and assistance, but when the brick walls were nearly completed another explosion blew them all out, severely injuring three or four more men engaged in the work. The horses were then got out, and the shafts closed. Several explosions have since occurred, and the colliery is, of course, temporarily suspended. The injured men are progressing favourably.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

AUG. 1.—The Coal Trade continues to progress satisfactorily, on the whole; we do not hear many complaints of slackness. The coke trade certainly is extremely dull in some quarters, on the Tyne for instance. The shipping of coke has been a very flat trade lately. On the Wear much activity prevails in some of the large collieries. At Cassop a new shaft has been sunk, and the works are going briskly forward, so much so that a scarcity of men has been experienced, and as the coal and iron trades in Staffordshire have been extremely dull, a number of men have been brought from the Midland counties to Cassop. Upwards of 100 stalwart fellows have been brought, who look like colliers. They will, we think, have no reason to regret coming to the North, as they have been well cared for since their arrival, and there is little doubt they will become useful after getting a little practice with the mode of working the coal, and be able to earn good wages. The Iron Trade continues sluggish, and the same may be said of the Chemical and Glass Trades. The latter has been extremely flat of late. The state of affairs in America is stated to be the principal cause.

The application of the Consell Iron Company to the Vice-Chancellor for additional time for the payment of the claims of the District Banks has so far been refused, and the members of the company have appealed to the Lords Justices. The business, as it stands, is in a very unsatisfactory position, and its speedy settlement is very desirable. Any stoppage of the large iron-works and collieries at Consell would be a serious disaster; this however will, it is hoped, be prevented.

The decision of the Committee of the House of Lords adverse to the formation of the Derwent and Consell Railway has taken the promoters of the bill, and we may add the public generally, completely by surprise. After the success of the bill in the House of Commons, the result of a most searching examination of the various witnesses, both for the bill and in the interest of the North-Eastern Company against the bill, and the result also of the most careful consideration of the whole subject by those gentlemen, it may well excite surprise that the committee of the House of Lords should reverse such a decision. What new facts or arguments have been brought forward to influence them in this decision, or whether the result has been achieved by the resolute perseverance of the gigantic North-Eastern, and the exercise of their influence, it is of course impossible to say at present. The whole subject appears to be involved in mystery and obscurity. To say that this occurrence is a great disappointment to the whole population, and the commercial classes of the North, is no more than the simple truth. An enquiry which will be anxiously made is—Are these important districts in the Derwent and Auckland valleys to be deprived of the convenience and facilities of a railway? No doubt this question will be answered by-and-by in a way to suit North-Eastern interests. But in the meantime the public are great sufferers from the delay.

**BOILER EXPLOSIONS.**—At the Association for the Prevention of Steam-Boiler Explosions meeting it was stated that during the last month three explosions had occurred, each attended with loss of life; two of the boilers were of ordinary Cornish construction, one of which failed from deficiency of water. The third was of the tubular locomotive class, and the explosion arose from the thinning of the plate just behind one of the laps situated in the cylindrical part of the boiler, and below the water line. This has occurred to stationary boilers, apart from corrosion, as caused by blowing joints or external damp, and may be attributed to disintegration of the plate, consequent on the constant buckling action which is induced in close proximity to single lines of rivets by heavy strains. The constant occurrence of explosions from weak places in the plates, entirely unsuspected, and only ascertained by a post mortem examination, as it were, shows the imperative necessity for laying bare the plates of all boilers which have been in work for any length of time, and having a faithful and most searching examination made of them on both surfaces. A boiler is too apt to be considered in a state of rest when once it is fixed on its bed, whereas the fact is that directly the fire is lighted all the parts are set in comparative movement one with the other; every fresh charge of coal expands the plates of the furnace-tube; every draught of cold air through the furnace-door contracts them; while the varying pressures of the steam and any irregularity in the introduction of the feed-water, more especially if cold, change the shape of the shell, so that the boiler is in a constant state of respiration, which must in course of time have an influence upon it. This shows the importance, in the first construction of boilers, of having all the cylindrical parts truly circular, and without any flat pieces in them, so as to prevent constant alternate buckling action, while it appears to point to some of the riveting as more enduring than single for continuous heavy strains; also, that in estimating the safety of boilers, time must always be considered as an element, and that nothing can be more fallacious than to argue that a boiler must be safe at a given pressure because it has stood it for several years.

**NOTICE TO FIRE INSURANCE COMPANIES.—BASTIER'S CHAIN-PUMP.**—Fire has ever been the most terrible enemy of Great Britain, and more particularly of London, in the annals of which city the too celebrated dates of 1666, 1697, 1834, &c., and lastly 1861, have been so indelibly inscribed that they will never be forgotten. The ordinary pump, in spite of its considerable power, and the many improvements which have been introduced in its construction, has unhappily proved inadequate to contend against the fearful disasters which appear daily to increase, and probably for this reason—the ordinary fire-pump is a force-pump, and by its action the water falls upon the fire in the form of a shower of rain, which is instantaneously absorbed by the flames. Now, in order that the water can be employed with success, it is necessary that the diameter of the orifice through which the water escapes should be considerably enlarged, which would be impossible, for two very intelligible reasons—the first is the insufficiency of the motive power; and the second, that if the orifice were enlarged to 4 inches in diameter, the water issuing from it would form no more than a head-like fountain, and the whole of the force-power would be wasted. Bastier's chain-pump, which has already been successfully adapted to mining, marine, and domestic purposes, seems to be the only pump that can be advantageously employed as a substitute for the ordinary fire-pump, inasmuch as it is portable, and easily put in position for work, whilst no other support is required than the wall of the burning building, and any quantity of water may be raised to any height. As soon as the requisite height has been attained, the water can be conducted in any direction by affixing a tube to the reservoir; and it cannot be supposed that a fire, however fearful in extent, could resist the extinguishing power of a continuous body of water, 5 or 6 inches in diameter, pouring like a river upon the flames. Mr. Bastier proposes the most effective and complete remedy for those fearful calamities which are familiarly called "fires." By the use of his system of pump, each citizen of

London may henceforth sleep in peace, or, at least, free from dreams that the sword of destruction, in the shape of fire, is hanging over his life and property. Mr. J. U. Bastier, C.E., of 19, Manchester-buildings, Westminster, will be glad to furnish any further particulars upon the subject to those interested in communicating with him.

#### THE THICK COAL MINING OF SOUTH STAFFORDSHIRE.

At the meeting of the Northern Institute of Mining Engineers, held in Birmingham, last week, Mr. Henry Johnson, of Dudley, mining engineer, read a very interesting paper upon "The Mode of Working the 'Thick' or Ten-yard Coal," peculiar to the South Staffordshire district. As the peculiarities of the district are different from those of the North mining district, and, as much of the matter is undoubtedly new, we subjoin a *resumé* of the paper in question. Mr. Johnson began by giving a description of the layers or beds comprising the great seam of coal called the "thick coal," and the various depositions, with their thicknesses, are subjoined—the terms made use of being those common to the provincial districts alluded to. First in order comes blue shale rock, then—

Thickness.	Thickness.	"Stint," or cutting for day's work.
1 ft. 6 in.	Black bat.....	45 ft. 6 in.
2 ft. 9 in.	Roofs.....	Coal
2 0	Top slipper.....	13 ft. 6 in.
2 0	White coal.....	13 6
1 6	Lambs.....	21 0
3 0	Tow coal.....	9 0
3 0	Brazils.....	9 0
1 0	Foot coal, or John coal.....	21 0
1 0	Slipper.....	21 0
1 ft. 3 in.	Hard stone, parting.....	9 0
4 0	Stone coal.....	6 0
4 3	Slipper and sawyer.....	6 0
0 3	Bench bat, parting.....	6 0
0 3	Bench.....	6 0

Spill. 1 6 Coal ..... 26 6 (Floor dark fire-clay, full of stigmara fucoides.)

The faces or natural cleavage of these beds varies, the cleavage of one bed being no criterion of the one lying above or below it.

This section is taken from the Heath Pit, West Bromwich, one of the pits the members of the institute descended. Mr. Johnson then went on to describe the first and successive operations of working the seam. He stated that the width of the shafts sunk in the South Staffordshire district was on an average 7 ft. in diameter in the clear between the 4½-in. brick lining, set in mortar, which was universally adopted. The shafts were always circular, and not square or oblong, as was the case in some other mining districts, and they were always sunk in pairs, one being about 10 yards distant from the other—no bratticed shafts being used. The two shafts being sunk through the seam, and a "sump" below when necessary, a gate-road is driven from one pit bottom to a convenient and suitable part of the boundary. Sometimes the extreme deep is preferred, whilst, with some colliery owners, the nearest and cheapest route to the boundary is adopted, for the sake of a speedy return of the capital expended. This gate-road is driven 9 ft. 6 in. wide, and is about 12 feet high, which takes the benches, slipper, and sawyer, stone coal and hard stone parting. Sometimes the slips break down, thereby making the whole height 14 ft. During the driving of this gate-road an air-head, for the purpose of ventilation, is driven alongside, and 5 yards from the gate-road, with "spouts," or "thurlings," about every 15 or 20 yards, or much nearer, according to circumstances, each back spout being successively dammed up as the gate-road proceeds. The pit bottom is usually "belled" out a little, and the inset, or "pit eye," made higher and wider than in a common gate-road. This being done, the gate-road is proceeded with. One workman, called a pikeman, holes away the benches and bench bat, about 2 ft. 3 in. high and 3 ft. 6 in. wide, and 6 ft. "in," for a day's work, for which "stint" he is paid 3s. 6d. (Three years ago it was 5s.). Another man follows the pikeman, and cuts 2 ft. 3 in. high, 6 ft. wide, and 6 ft. high, for the same money, or they will "throw their work together," and each take it 4 ft. 9 in. wide and 6 ft. "in." This operation is proceeded with until 10 or 15 yards in length of holing is done, when cutting the slipper and sawyer is commenced, which will be hereafter explained. During the driving of one-half the 10 or 15 yards of gate-roading a lad, from 12 to 15 years old, is employed with an iron rake and basket to carry away the coals and slack produced by the two men, and his wages would be about 2s. 6d. per day of 10½ hours, for one and a half day of the pikeman, and for the remaining distance two boys would be required to keep the dirt clear. The butty, or charter-master, finds these pikemen all tools and candles, and two quarts of pit beer per day, so that a good and quick workman, who can do two days stint in one day, would be a saving in candles and beer. The beer, it may be mentioned, is supplied at 1½d. per quart, and is always allowed to the workmen in the thick coal, and half that quantity in the thin seams. The price paid to the men for cutting 6 feet long and 4 feet 3 inches thick is 3s. 6d., and the allowances the same as in the holing.

After some details of minor importance, Mr. Johnson went on to elucidate the process of constructing the air-heading. This, he remarks, which communicates with the upcast shaft, and is intended to ventilate the gate-road and the workings connected therewith, is driven 3 ft. 6 in. wide, and about 3 ft. high; in some cases 4 ft. x 4 ft. The roof of the air-head is on the same level as the roof of the gate-road, and serves to ventilate it in an effectual manner. The stint for a pikeman in driving the air-heading is 3 ft. 6 in. high, 3 ft. 6 in. wide, and 4 ft. in for a day's work, 3s. 6d., with the same allowances as in the holing. Some remarks about "opening the work" are illustrated by diagrams ingeniously drawn, which refer to a side of work of four pillars, or a "nice little side." The same diagrams show the plan of constructing the "bolt-holes" from the gate-road, the "getting of bottom coal," and other working. After describing this very elaborately, he proceeds to remark upon the "cutting the top coal." He then says, after the top slipper is cut and drawn out, which is often a matter of congratulation, the roofs are, in the words of the collier, said "good bye to," and never expected to be realised; but sometimes they break down of their own accord, without the superincumbent strata following, and then no time is lost in getting them out of the way, which would leave the side of work or chamber more like a coal quarry than a coal pit. It is not always the case that the bottom coal is got out in the uniform progress, or that the top coal is cut in towards the bolt-hole in the order set forth, as much depends upon the nature of the demand for the different qualities of the coals. Generally speaking, the top coal is commenced to be "cut" in before the bottom coal is all cleared out nearest the bolt-holes, in order to mix the different qualities, to meet the varied requirements. In cutting the top coal in large sides of work, where there is great demand, cutting of two measures, making together 6 or 8 ft. thick round, four or five pillars are made, and large quantities of coal are "thrown" together—as much as 2000 or 3000 at one drop have been seen, the effect of which is to make the floor of the mine tremble as with a partial earthquake. Both the roof and floor of the thick coal vary considerably, and either one or the other, if of an unfavourable character, as a matter of course influences not only the size of the sides of work, but the width of the openings and size of the pillars, and the cost of getting, &c.; as, for instance, a gate-road in the Park-head coal would stand better for seven years than one in the West Bromwich coal would for seven months.

By the time the top coals are brought back, and pretty well thinned over, the bolt-hole then comes a precarious operation, as the name of the "outlet" implies, for never was an aperture more rightly christened. Near the finishing of a side of work, by looking up over the mouth of the bolt-hole, will be seen some known good plucky workman perched up on a scaffold some 20 feet high from the ground, cutting the last remnant of white coal, or top slipper, almost breathlessly hearkening to every blow of his pike. When he hears the coal begin to stir, he manages to scramble down and get safe into the bolt-hole, as the falling coal sometimes scrape his heels. After the side of the work is thus finished, a refuse dam is put into these bolt-holes and in the air-head, and a good strong brick and mortar wall put on the wind side, being cut deep into the floor sides and top of the bolt-hole, which is intended to hermetically seal the side of the work just finished; and this precaution is taken immediately the last coals are drawn out. After some remarks upon the "Opening of New Work," illustrated in the diagrams, the paper alludes to "Fire Stink;" this, it says, would perhaps more properly be termed "spontaneous combustion, or sulphuretted hydrogen," is nowhere so troublesome as in the thick coal of South Staffordshire, and it is pretty much confined to that seam which ranges from 8 to 12 yards in thickness. This is a great source of trouble, and though it is impossible entirely to remove it, yet it may be to some extent mitigated, but that is all. In a land sale pit, where the produce was consumed wholly for household purposes, and no communication with rail or water, the floor of the workings have been known to be covered to the extent of 60 or 80 acres with from 3 to 4 yards thick of worthless slack, and this very much settled the question so often raised, that because coal was a certain thickness the produce could not always be proportionate.

Speaking of the gases, Mr. Johnson says that the gases most prevalent

and troublesome here are sulphuretted hydrogen and carbonic acid; the latter more especially in the second working of the thick coal, or what is termed "ribs and pillars." Indeed, so uncertain is the action of these gases, that the horses have to be drawn up at night if the wind happens to be veering round to south-west; and when plump in that point, with a corresponding fall in the barometer, it is certain to "put the pit to stand" from choke-damp. Carburetted hydrogen, or what the colliers call "sulphur," is rarely of any moment. In new districts, or where it is pent in by faults or dislocations, it is developed, but not then in extraordinary quantities. The ordinary test for it is a common Davy, with the addition of an extra gauze, the men having great faith in a single but not in a double one. After alluding to the old practice of using a candle attached to a string, to remove any accumulation of gas in the mine, instead of the Davy now adopted, Mr. Johnson went on to comment upon the produce per acre, remarking that almost innumerable circumstances governed the yield, and the proportion of coals, lumps, and slack, so that it was almost impossible to lay down any reliable data by which an accurate account could be obtained. The "ton" weight of coals in this district was a misnomer—there was no such thing; there was a something which was entered in the sales books, and paid for as a ton, but it was a "parcel," containing about 1½ tons; and mining engineers in the district were often asked by their employers how it was that only a certain quantity of coal had been realised per acre. Before estimating the produce of thick coal per acre in any particular colliery, it would be necessary to ask the following questions:—Is the coalowner compelled to sell for cash? If he is, the buyer will get his discount and great overweight also. Does he load coal dealers' boats? If he does, he must suffer in the weight, because many of them can afford to retail the coals, after fetching them 7 or 8 miles, at less price than they cost at the pit. Does he supply his own iron-works? If he does, the manager will have a very "big" ton if he can. Is the mine his own, or does he work it on a royalty? If the former, he will get out more per acre than if it belonged to somebody else. There are also other considerations, such as is the thickness 7 yards or 10? Is the mine undulated with faults and dislocations? Was the coal got during good or bad trade, because that will make a difference of above 10 per cent. in the produce per acre; so that the produce of the 10-yard coal varies from 12,000 to 20,000 tons per acre. In the second working (ribs and pillars) the produce would range from 3000 to 7000 tons per acre. As to the proportions of coal, lumps, slack, &c., Mr. Johnson gave the following two extremes which came under his notice:—

Colliery of Thirty Acres.	Colliery of Eighty Acres.
Coals..... 45 per cent.	Coals..... 8 per cent.
Lumps..... 34 "	Lumps..... 15 "
Slack..... 23 = 100	Slack..... 77 = 100

What made the matter worse was that the 30-acre colliery produced 19,000 tons (or parcels) per acre, and the other colliery only 13,000 tons per acre; so that the first-named proportion would be 370 per cent., and the yield 106 per cent., better than the other. Speaking of the high "royalties" paid in the district, Mr. Johnson mentioned a case he knew some time ago where the tenant was paying upon best coal within a fraction of 5s. per ton, on lumps nearly 3s. per ton, and on fine slack something over 1s. per ton. This was in the first instance 199 per cent. higher than the cost of getting and raising the coal; in the second case, 33 per cent.; and in the last, 145 per cent. Such cases were not general, but it was a sample of a great section, and, therefore, it was no wonder the iron trade was said to be leaving the district. The lax mining discipline of South Staffordshire was another cause of the increased cost of producing the raw material. Mr. Johnson concluded by referring to the Parkhead section, the finest seam of coal in Europe, and to the Clay Croft open work of the Earl of Dudley, 12 yards and 2 feet thick, which had produced 40,000 tons per acre, to the faults to be found in thick coal, and to the mode of ventilation adopted in the district, which, he said, was not required to be so abundant as in the northern districts, because an undue current of air in a rib and pillar working for 12 hours would, in all probability, cause "fire stink" to break out, when the usual caution would have prevented it. The paper was very attentively listened to throughout, and the President of the Institute at its close moved a vote of thanks to Mr. Johnson.

Her Majesty's Commissioners for the International Exhibition of 1862 have requested the following gentlemen to act as a committee in connection with Class 1 (Mining, Quarrying, Metallurgy, and Mineral Products) in the coming Exhibition:—Sir K. I. Murchison, D.C.L., F.R.S.; Prof. Warington Smyth, F.R.S.; Percy, M.D., F.R.S.; Ramsay, F.R.S.; Mackenzie, F.R.S.; Messrs. Hussey Vivian, M.P., Sam. H. Blackwell, Nicholas Wood, Thomas Sopwith, F.R.S., R. B. Grantham, and J. Rawson Barker.

**SCOTCH PIG-IRON TRADE.**—The last weekly return of the shipments of Scotch pig-iron again affords evidence that the trade, which in the months of April, May, and June exhibited an extraordinary degree of activity, has received a decided check. It will be interesting to note the course which shipments have taken during the present year, from Jan. 1 to July 27. In the first six months of 1861, as compared with 1860, the following results appear:—

	1861.	1860.
Month ending January 26.....	Tons 31,519	32,454
" February 23.....	29,738	25,278
" March 30.....	42,854	46,982
" April 27.....	42,622	50,585
" May 25.....	65,637	54,488
" June 29.....	73,800	52,925

The totals for the first six months were 305,670 tons in 1861, and 262,658 in 1860, showing an increase of 43,012 tons. In July the shipments have been as follows, as compared with the corresponding month of 1860:—

	1861.	1860.
Week ending July 6.....	Tons 12,970	11,608
" July 13.....	12,077	7,138
" July 20.....	11,278	14,400
" July 27.....	11,978	14,710

Thus, notwithstanding the check observable during the past fortnight, the shipments in the month ending July 27 reached a total of 48,304 tons, against 47,846 tons in the corresponding four weeks of 1860, showing a further increase of 458 tons; the total shipments this year having been 353,974 tons, as against 310,504 tons in 1860.

**THE WINDING-UP ACT IN IRELAND.**—A case of considerable importance to the members of the Stock Exchange, and to that large portion of the public who may be disposed to invest their capital in undertakings in the sister country, has just been decided by one of the Masters in Chancery in Dublin. The facts of the case afford a curious illustration of the mode in which legal business is conducted in Ireland, and give additional force to the motion made in the House of Lords by Lord Clarendon, for a commission of enquiry "into the constitution, practice, and procedure of the Common Law and Equity Courts in Ireland." The case arose out of the winding-up of a company formed in 1852 with a capital of 20,000l., to work what were described as the Mizen Head Mines, Ireland. Owing to some difficulties as to the locality or value of these mines, or some other cause, the company was, shortly after its formation, ordered to be wound-up, and in the month of April last the outstanding uncalled calls, amounting to 11,685l., were sold for the sum of 15l., and applications were immediately made to persons whose names had been placed on the list of contributors, and, among others, to Messrs. Mackie and North, stock and sharebrokers, of 29, Threemilestone-street. This firm disputed their liability as shareholders, and, by order of the Master of the Rolls, the claim was re-opened. On the hearing of the case it was proved by affidavits and evidence that the London solicitors of the company, in February, 1853, gave Messrs. Mackie and North, as stock and sharebrokers, 1000 shares in the company to sell for and on account of the company. That of these shares they returned 250 unsold, and sold the remaining 750 between March 30 and April 5, 1853, and on April 16, 1853, gave to Messrs. Long and Long of 375l., the amount of the proceeds, less commission. That never, directly or indirectly, they (Messrs. Mackie and North) purchased or held, as shareholders, any shares in the company, or signed any document in reference to shares in the company, except such as it was customary for brokers to sign, and had never been called upon for payments of calls, or received any notice of the winding-up proceedings, until they received Mr. Rosenthal's application last May. On the other side, it was conceded that notice had not been served on them as to the list of contributors, but it was relied on that advertisements of it had been published in the newspapers, and that in 1856 Mr. Murdoch Green was appointed by the Master to attend the proceedings in the Master's office on behalf of the contributors generally, and that, in a legal point of view, solicitor Mackie and North had constructive notice. Mr. Green's partner being not given to Messrs. Mackie and North as brokers, but that 570 of them were issued to them as shareholders. The books of the company were now sought to be placed on the list of contributors. He was obliged to take them, imperfect as they were, as *prima facie* evidence when settling the list of contributors. On the other hand, these gentlemen, Messrs. Mackie and North, now came before him with perfectly well-kept books, and every page in which case stood well together. It was a curious illustration of the irregular way in which the books of the company had been kept, that only 570 shares appeared in them, and that the balance of 430 shares, which had been received by Messrs. Mackie and North, and which he considered most satisfactory, and he had







**COMPRESSED COAL COMPANY (LIMITED).**

Incorporated under the 19th and 20th Vics., cap. 47, and 20th and 21st Vics., cap. 14, whereby the liability of the shareholders is limited to the amount subscribed.  
Capital £100,000, in 50,000 shares of £2 each, with power to increase.  
Deposit, 5s. per share on application, 15s. per share on allotment.

**DIRECTORS.**  
The Hon. F. HENRY P. BERKELEY, M.P., Bristol; Victoria-square, Pimlico, S.W. (Chairman).  
A. P. CLAYTON, Esq., Seven Oaks, Kent.  
Sir JAMES DOWDALL, K.B., Dublin.  
ROBERT FORD, Esq. (Messrs. Ford and Jackson), London and Milford Haven (Milford Haven, Cork, and Waterford Royal Mail Steam Packet Company).  
The Lord GEORGE HILL, Ballyshane, Ramelton, Ireland.  
Capt. H. J. JORDAN, The Beaumonts, Chertsey.  
Sir CHARLES KIRKPATRICK, Bart., of Closeburn, Dumfriesshire.  
General T. E. M. MASON, Brompton, S.W.  
JAMES PROTHROPE, Esq., Merchant, Bristol.  
SYLVANUS PADLEY, Esq., J.P., Colliery Proprietor, Swansea.  
T. W. RANKIN, Esq. (Director of the Bristol and South Wales Union Railway Company), Bristol.  
WILLIAM DAVIES STEPHENS, Esq. (Messrs. Laing and Stephens), Steam Ship Owners, Newcastle-on-Tyne.

**BANKERS.**  
Messrs. Stuckey's Banking Company.  
London and West of England. The City Bank.

**SOLICITORS.**  
London..... Thomas J. Stubbs, Esq., 46, Moorgate-street, City.  
Bristol..... Alfred Henderson, Esq.  
Cardiff..... Clement Waldron, Esq.  
Swansea..... Richard A. Essery, Esq.

**BROKERS.**  
London..... Messrs. Froom Brothers, Change-alley, Cornhill.  
Bristol..... A. F. Morcom, Esq.  
Manchester..... J. Gordon, Esq.  
Dublin..... Messrs. J. and J. Stevens.  
Belfast..... Messrs. Orr and Co.

**CONSULTING ANALYTICAL CHEMIST.**  
William Herapath, Esq., F.C.S., Professor of Chemistry, Bristol.

**CONSULTING MINING ENGINEER FOR WEST OF ENGLAND AND SOUTH WALES DISTRICTS.**  
Alexander Basset, Esq., C.E., Cardiff.  
ENGINEER—Mr. J. D. Humphreys.

**SECRETARY—Mr. W. Baldoock.**

**OFFICES.**—14 and 15, ST. SWITHIN'S LANE, LONDON, E.C.

The object of this company is to carry out the process of compressing small coal into blocks, without the admixture of extraneous cohesive matter; for this purpose the exclusive use of several valuable patents has been secured on very favourable terms.

By this process the immense quantity of slack or small coal annually wasted is rendered not only equal, but in many important points superior, to the ordinary coal or any artificial fuel at present manufactured.

This fuel is applicable for maritime, manufacturing, and domestic purposes, and special advantages are held out to shareholders.

Applications for shares may be addressed to the secretary, brokers, and solicitors of the company, and must be accompanied either by a remittance or a banker's receipt for the amount of 5s. per share on the number of shares applied for. Three months' notice of future calls will be given.

Detailed prospectuses and all information may be obtained on application at the offices of the company.

**COMPRESSED COAL COMPANY (LIMITED).**—Notice is hereby given, that the DIRECTORS will PROCEED to an ALLOTMENT of SHARES in this company on and after FRIDAY, the 9th August.

By order of the Board, W. BALDOOCK, Sec.  
14 and 15, St. Swithin's-lane, London, E.C., July 31, 1861.

**LONDON AND COUNTY BANKING COMPANY.**

Subscribed Capital £1,250,000, in 25,000 shares of £50 each.  
Paid-up Capital £500,000.—Reserve Fund £125,000.

**DIRECTORS.**  
THOS. TYRINGHAM BERNARD, Esq., M.P.  
PHILIP PATTON BLYTH, Esq.  
JOHN WILLIAM BUMESTER, Esq.  
CHARLES SALISBURY BUTLER, Esq., M.P.  
WILLIAM CORY, Esq.  
GENERAL MANAGER—William McKewan, Esq.

**HEAD OFFICE.**—21, LOMBARD STREET.  
(At present temporarily at the South Sea House, Threadneedle-street.)

At the HALF-YEARLY MEETING of the proprietors, held on Thursday, the 1st of August, 1861, at the London Tavern, Bishopsgate-street, the following report for the half-year ending the 30th of June, 1861, was read by the secretary.

WILLIAM CHAMPTION JONES, Esq., in the chair.

**REPORT.**  
Your directors have the pleasure to lay before the proprietors of the bank their report and balance-sheet for the six months ended on the 30th of June last.

These accounts have been examined and signed by the auditors. They show a net profit for the half-year of £44,473 3s. 3d., after payment of interest to customers (£47,451 0s. 5d.), and of the expenses at the head office and branches, income tax, rebate on bills discounted and not due, and making provision for bad and doubtful debts.

Your directors have declared a dividend of 5 per cent. for the half-year out of the net profit, as above stated, and carried forward the balance of £19,473 3s. 3d.

The dividend will be payable at the head office, or any of the branches, on and after Monday, the 12th inst.

**BALANCE-SHEET OF THE LONDON AND COUNTY BANKING COMPANY, JUNE 30, 1861.**

Dr.—Capital paid-up.....£ 500,000 0 0  
Reserve fund.....125,000 0 0  
Amount due by the bank for customers' balances, &c.....£5,668,865 1 7

Liabilities on acceptances and endorsements by the bank, circular notes, and letters of credit.....304,483 11 6= 5,973,348 13 1

Profit and loss balance brought from last account.....3,728 14 11

Gross profit for the half-year, after making provision for bad and doubtful debts.....162,121 8 8= 165,850 3 7

Total.....£5,764,198 16 8

Cr.—Cash on hand at head office and branches.....£ 658,559 1 9

Cash placed at call and at notice.....893,401 4 7= £1,551,960 6 4

Investments—Government and guaranteed stocks.....899,042 14 5

Other stocks and securities.....110,000 17 11= 809,042 12 4

Discounted bills, notes, and temporary advances to customers in town and country.....4,188,096 15 7

Advances to customers on special securities.....321,655 0 6= 4,509,751 16 1

Freehold premises in Lombard-street and Nicholas-lane, freehold and leasehold property at the branches, with fixtures and fittings.....90,687 9 8

Interest paid to customers.....47,451 0 5

Salaries and all other expenses at head office and branches, including income tax on profits and salaries.....55,295 11 10

Total.....£5,764,198 16 8

**PROFIT AND LOSS ACCOUNT.**

Interest paid to customers.....£ 47,451 0 5

Expenses, including salaries.....55,295 11 10

Rebate on bills not due, carried to new account.....18,630 8

Dividend of 5 per cent. for the half-year.....25,000 0 0

Balance carried forward.....19,473 3 3

Total.....£ 165,850 3 7

Balance brought forward from last account.....£ 3,728 14 11

Gross profit for the half-year, after making provision for bad and doubtful debts.....162,121 8 8

Total.....£ 165,850 3 7

We, the undersigned, have examined the foregoing balance-sheet, and have found the same to be correct.

Signed, FRED. HARRISON, HENRY OVERTON, JOHN WRIGHT, Auditors.  
London and County Bank, July 25, 1861.

The foregoing report having been read by the secretary, the following resolutions were proposed and unanimously adopted:

1. That the report be received and adopted, and printed for the use of the shareholders.

2. That the thanks of this meeting be given to the board of directors, for the able manner in which they have conducted the affairs of the company.

W. C. JONES, Chairman.

The Chairman having quitted the chair, it was resolved and carried unanimously:—That the cordial thanks of this meeting be presented to William Champion Jones, Esq., for his able and courteous conduct in the chair.

Signed, P. P. BLYTH, Deputy-Chairman.  
Extracted from the Minutes, Signed, R. P. NICHOLS, Secretary.

**LONDON AND COUNTY BANKING COMPANY.**

Notice is hereby given, that a DIVIDEND on the Capital Stock of the company, of FIVE PER CENT., for the half-year ending the 30th June, 1861, WILL BE PAID to the proprietors, either at the Chief (temporary) Office, South Sea House, Threadneedle-street, or at any of the company's branch banks, on and after Monday, the 12th inst.

By order of the Board, W. McKEWAN, General Manager.  
South Sea House, Threadneedle-street, August 1, 1861.

**LONDON AND COUNTY BANK.**—Notice is hereby given,

that the RATE OF INTEREST allowed upon DEPOSITS at the Head Office and Metropolitan Branches is this day REDUCED TO FOUR PER CENT. per annum, from August 1, 1861.

W. McKEWAN, General Manager.

**ALBERT AND MEDICAL LIFE ASSURANCE.**

7, WATERLOO PLACE, Pall Mall, LONDON, S.W.

ESTABLISHED 1838.

The business of the Medical, Invalid, and General Life Assurance Society having been amalgamated with the Albert Life Assurance Company, the united business will henceforth be carried on under the above title.

Accumulated fund exceeds.....£500,000

Subscribed capital.....447,180

Paid-up capital.....137,000

Annual income from life premiums, upwards of.....220,000

The new business is now progressing at the rate of more than £25,000 per annum.

From Prof. De Morgan's report upon the last valuation of liabilities (end of 1858), and the statements of accounts, it appeared that the surplus in favour of the Albert business alone, after providing for every liability, was £192,925 2s. 11d.

HENRY WILLIAM SMITH, Actuary.

C. DOUGLAS SINGER, Sec.

**In the Court of the Vice-Warden of the Stannaries.**

Stannaries of Devon.

In the Cause of WEBBER v. GOYEN.

**TENDERS.** stating the highest price that will be given for the

following MACHINERY, MATERIALS, and EFFECTS now being at and upon the DEVON GREAT WHEEL ELIZABETH MINE, in the parish of Widdicombe, within the said Stannaries, and belonging thereto, viz.:—30 ft. iron WATER WHEEL, 5 ft. breast, with cranks; 1 T. bob shears, with pulleys, 60 ft.; 24 fms. of 11 in. pumps, 2 ft. 6 in. working pieces, 2 1/2 in. do. pieces, 24 fms. of 10 in. bucket rods, capstan, 100 fms. of 9 in. rope, 50 fms. of rods, pulleys and stands, and 50 fms. of chain; horse winch, 24 fms. of ladders, kibbles, 80 fms. of launders and stands, crab winch, 2 wheels belonging to fire-engine, and brass working pieces, bellows, smith's tools, a quantity of new and old iron, steel, timber, rope, several iron blocks for 3/4 in. chain, new lifting jack, large grinding stone, new shovels, beam and scales, small ore crushers, account-house furniture, and a variety of other effects in general use in mines, will be received at the Registrar's office, Truro, until the 13th day of August next.

Further information may be had on application to the officer of the Court in possession on the mine.—Dated Registrar's Office, Truro, July 30, 1861.

**SALE OF MINING SHARES.**

RHEIDOL UNITED MINES, NEAR DEVIL'S BRIDGE, CARDIGANSHIRE.

MESSRS. C. AND H. GILLARD are instructed to SELL, BY AUCTION, at the Swan Hotel, Stafford, on the 5th day of August next, at Four o'clock in the afternoon, the following SHARES in the above company:—

Lot 1.—THREE HUNDRED AND SEVEN SHARES.

Lot 2.—EIGHTY SHARES.

Lot 3.—THIRTY SHARES.

Lot 4.—TWENTY-FIVE SHARES.

These shares will be sold on the condition that 3s. per share of the purchase money be appropriated for the payment of the calls now due and in arrears upon them, and the purchaser will incur no expense whatever in conveyance.

**VALUABLE MINE MATERIALS FOR SALE.**

MR. WILLIAM HANCOCK WILL SELL, BY AUCTION, on

Wednesday, the 7th day of August, 1861, at Eleven o'clock in the forenoon, at ST. DENNIS CONOLES MINES, in the parish of St. Dennis, near St. Austell, Cornwall, the VALUABLE MACHINERY and MATERIALS thereon, comprising:—

ONE 46 in. cylinder ROTATORY ENGINE, with TWO BOILERS, nearly new, about 20 tons.

TWO FLY WHEELS, with shafts, plunger blocks, &c., complete, about 26 tons.

TWO 9 in. FLY WHEELS for pumping, with brasses, plunger blocks, &c. Four cast-iron stamps' axles attached, with 40 heads, frames, and lifters complete.

11 ft. 8 in. pumps.

13 ft. 9 in. ditto.

1 ft. 12 in. ditto.

1 ft. 10 in. plunger pole, with case, and stuffing box and gland.

1 ft. 10 in. 8 1/4 in. working barrel.

1 ft. 6 in. 8 1/4 in. wind-bore.

1 ft. 8 in. ditto.

1 ft. 9 in. ditto.

Balance bob, with strapping plates complete; several pairs of connecting plates and strapping plates; several flat-rod, whin, and other shivers; several tons of chain, 3/4, 1/2, and 1 in.; iron and wood tram wagons, railroad iron and saddles, tram wagon wheels, staples, glands, and yokes; plunger blocks, steam pipes, large pair treble blocks, small pair treble blocks, winch, flange pins, rod pins, bolts and nuts, crank and bucket settings, 10 in., 9 in., and 8 in. buckets; ladders, 50 fms. of 7 in. and other launders, 100 fms. of 5 in. wood piping, 42 in. and 34 in. smith's bellows, 1 portable bellows, anvil, smith's crane, taps and plates, screwing tools, smiths and miners' tools, 2 in. drop screws, spanners, beams, scales, and weights; crosscut and other saws, elster, boiler plates, large quantity of new and old iron, lifting jack, brass bell with stand, all the materials of the tin-dressing floors and tools, with knives, large tin chisel, grinding stone, carpenter's benches, 36 tons of coal, 11 dozen miners' candles, powder, safety-fuse, powder cans, new timber and plank, new coifer plates and grate frames, grate plates, stamps' guides, cams, iron lifters, large new crank, cog wheels, wheelbarrows, hemp, leather, tallow, oil, tar, nails of different sizes, shovels, hilt, miners' chests, cast-steel borers, grate of window glass, quantity of wrought and cast scrap iron, old and new brass, lead, &c.; 62 fms. of iron frame for chimneys, mica pits, 2 new chimneys, 40 ft. by 20 ft. with slated roof; a quantity of useful timber, in lots; a Whitechapel spring cart and harness, saddle and bridle, cart and harness, and the whole of the account-house furniture.

Also, the LEASE of the MINE, held for a term of 21 years, from 26th December, 1859, at 1-20th dues; and the LEASE of the CHINA CLAY and STONE WORKS, held for the same term, at the dues of 1s. per ton on 500 tons and upwards, with a minimum rent of £25 per annum.

Dated July 23, 1861. WILLIAM HANCOCK, Auctioneer.

Agent to the Royal Exchange Assurance Corporation.

**CARDIGANSHIRE.**

THE BRYNGLAS SILVER-LEAD MINE.

MR. WILLIAM HALL is instructed to sell the above, BY PUBLIC AUCTION, at the Fox Hotel, Shrewsbury, on Thursday, the 15th August, 1861, at Two o'clock punctually, in the Lot.

The property is situated about 12 miles from the port of Aberystwyth, and adjoining the main road to that place, comprises the BRYNGLAS SILVER-LEAD MINE, and the whole of the recently-erected and very VALUABLE MACHINERY (in excellent condition) and MATERIALS, comprising a WATER WHEEL, 36 ft. by 4 ft. breast; a crusher, complete; a drawing machine, 25 fms. of 2 in. rods, chain and kibbles, 25 fms. of 8 in. pumps, 25 fms. of ladders, 7 new jiggers, all complete; slime troughs, 7 cwts. cast-steel, 1 ton bridge rails, miners' tools, &c. Also, a counting-house, blacksmiths' shop, and other buildings.

The engine-shaft is sunk 26 fms. from the surface, and driven 25 fms. north on the course of the lode, from which, and other parts of the mine, a considerable quantity of lead ore has been raised and sold.

There is an abundant supply of water, and the machinery, which is nearly new, is of the very best description.

The lease is held for 21 years, from the 25th December, 1858, and the royalty is 1-13th.

The mine and machinery may be viewed on application to Capt. OWEN, at the mine, of whom particulars may be had; also of Mr. JOHN WADE, the secretary, at the office, Clarendon, Shrewsbury.

VALUABLE and IMPORTANT ESTATE, containing about 225 acres, at HEDNESFORD and LEACROFT, in the PARISH of CANNOCK, STAFFORDSHIRE, including the celebrated HOTEL, the "CROSS KEYS," at Hednesford, HOUSES, and OTHER BUILDINGS in the village, and LANDS immediately in connection with and adjoining to the Hednesford New Colliery, the Cannock Mineral Railway, and the canal wharf and tramway now in course of formation by the Birmingham Canal Company.

MESSRS. E. AND C. ROBINS WILL SELL, BY AUCTION, on

Wednesday, the 21st day of August next, at the Swan Hotel, Wolverhampton, at Four o'clock in the afternoon, the VALUABLE ESTATE, called the "CROSS KEYS," at HEDNESFORD, the principal part whereof is freehold and a small portion copyhold, containing about 225 acres, including the HOTEL, TRAINING STABLES, FARM and OTHER BUILDINGS, occupied by Mr. John Wilkins and others. Also, various HOUSES, TRAINING STABLES, OTHER BUILDINGS, and LANDS in and about the village, and extending from the Cross Keys Hotel and Mr. Pigott's Hednesford New Colliery to the line of the Cannock Mineral Railway. The high road from Cannock to Rugby passes through the estate.

The road is a well-constructed highway and canals have already advanced the neighbourhood, and occasioned an extensive application of land for villa and general building purposes. Public works in contemplation will confer still further benefits. The large quantity of coal raised on Cannock Chase, and particularly at Mr. Pigott's Hednesford New Colliery, adjoining this property, clearly indicates the existence of mines in the estate, and experienced practical miners have reported them of unquestionable quality and great value.

The enclosure of the wastes now in progress will, as in the case of other parishes that have already been enclosed, most materially alter and improve the character and value of the district. The estate will be first offered in one lot, but if not sold, will be immediately put up in about nine lots.

Particulars with plans and conditions of sale, will speedily be prepared, and may be procured from Messrs. BARKER, BOWEN, and PEAKE, solicitors, 1, Gray's Inn-square, London; Mr. PEAKE, land agent, Charley Manor-house, near Stafford; Mr. BAILEY, mineral agent, the Pleck, near Walsall; at the Cross Keys at Hednesford; the Swan Hotel, Wolverhampton; and from E. and C. ROBINS, surveyors and auctioneers, New-street, Birmingham.

**NEW COLLIERY, NAILSEA, NEAR BRISTOL.**

FOR SALE, BY PRIVATE CONTRACT, the WHOLE of the PLANT and MATERIALS at the above colliery, comprising:—

ONE HIGH PRESSURE DIRECT ACTING PUMPING ENGINE, cylinder 45 in. in diameter, and 10 ft. stroke.

ONE HIGH PRESSURE WINDING ENGINE and gear, cylinder 12 in. diameter.

ONE HIGH PRESSURE WINDING ENGINE, cylinder 16 in. diameter.

THREE CYLINDRICAL BOILERS, 41 ft. by 6 ft.

ONE CYLINDRICAL BOILER, 18 ft. by 4 ft.

ONE CYLINDRICAL BOILER, 20 ft. by 3 ft. 6 in.

Hammered iron pumping cranks, T. bobs, 19 in., 14 1/2 in., 5 1/2 in., 5 in., and 4 1/2 in. forcing, lifting, and hand pumps; hammered iron straps, double straps and tail joints, buckets, clacks, wrought-iron clacker, lifting screws, chains, large capstan, double-power crab winch, 80 fms. 10 1/4 in. capstan rope, 8 in. capstan and other ropes, blocks, boring tools, wrought-iron air pipes, tram plates, smith's bellows and tools, wagons, carts, &c.

Triple-winch at the colliery; and for all further particulars, to BODDAM CASTLE, Esq., No. 29, Corn-street, Bristol.

**DERBYSHIRE.**

THE ALDERWASLEY FORGE AND WORKS, NEAR THE

AMBERGATE STATION ON THE MIDLAND RAILWAY.—TO BE LET, on a lease for 7, 14, or 21 years, and may be entered upon immediately, the above-mentioned FORGE AND WORKS, with the STORE ROOMS, OFFICES and BUILDINGS, ROLLING and SLITTING MILLS, on the banks of the River Derwent, in the liberty of Alderwasley, and the WATER-WHEELS of 70 horse power and MACHINERY belonging thereto, late in the occupation of Messrs. Mold, who for nearly 50 years carried on a lucrative and extensive business as ironmasters at the said works, together with a newly-erected MESSUAGE, or DWELLING HOUSE, very pleasantly situated near the said works, with the green-house, stables, coach-house, and capital garden belonging thereto, and upwards of 30 acres of excellent land, and 15 workmen's houses and counting-house, near or contiguous to the works.

The works are situated within half a mile of the Ambergate station on the Midland Railway, and the Cromford and Belper turnpike-road, the branch railway from Ambergate to Rowley (on which there is a siding and wharf for the use of the works), are all parallel therewith and immediately contiguous thereto, and afford excellent railway and canal transit to and from London, Leeds, Nottingham, Derby, and all parts of the kingdom; and the extensive communication with Manchester, Liverpool, &c.

The works are also available for saw-mills on an extensive scale, or for any other purpose requiring power and facility of transit.

For further particulars, and to treat, application may be made to Messrs. WOODHOUSE and JEFFCOCK, civil and mining engineers, Derby; or at the offices of Messrs. NEWBOLD and SON, solicitors, Matlock, from whom tickets may be obtained to inspect the works.

**MESSRS. WHEATLEY KIRK AND CO., ENGINEERS,**

TOOL MAKERS, CONTRACTORS, &c., tender their best thanks to their numerous friends and customers, at home and abroad, for their liberal patronage for so many years past, and have now the honour to announce their REMOVAL from their old premises, Cross-street, to their new premises, works, offices, &c., called the ARCHIMEDEAN WORKS, ALBERT STREET, ST. MARY'S MANCHESTER (late Messrs. Barton's Copper Works), where they are determined to exercise their utmost endeavours in the execution of all orders committed to their charge, with economy, punctuality, and dispatch.

N.B.—Their Weekly Circular is published as usual, and may be had on application gratuitously, or by post for a stamp.

Archimedeian Works, Albert-street, St. Mary's, Manchester.

**WHEATLEY KIRK** tenders his grateful acknowledgements to his

numerous and influential clients for their past favours committed to his charge, for upwards of 20 years, in his professional capacity of valuer, auctioneer, &c., and respectfully notifies his REMOVAL from his old chambers, Cross-street, to a more commodious suite of offices, attached to the works of Messrs. Wheatley Kirk and Co., Engineers, &c., ALBERT STREET, ST. MARY'S, where he intends to prosecute his professional labours in all matters, whether of consultation, arbitration, valuation, or sale (by auction or private contract), agency or otherwise, appertaining to railway property, machinery, engineering, works, mills, factories, mining, estates, patents, partnerships, &c.—Address, Albert-street, St. Mary's, Manchester.

**TO IRON MANUFACTURERS AND OTHERS.**

MR. WHEATLEY KIRK (Engineer, &c., Manchester) is honoured

with instructions to SELL, BY AUCTION, at an early date (if not previously disposed of by private contract, of which due notice will be given), in consequence of the failure of a public company, for whom the following expensive machinery, &c., has been manufactured, and in one or more lots, as may hereafter be agreed upon, ONE magnificent BLAST ENGINE, complete, by those eminent engineers, William Fairbairn and Sons, of Manchester; the bore of steam cylinder is 38 in., and of the blowing cylinder 86 in., working a 7 ft. stroke, including all preparation for another engine at any future period, together with all the fittings, materials, &c., constituting the hot air stoves, furnaces, &c.

Full particulars in next week's paper; or in the interim may be had at the offices of Mr. WHEATLEY KIRK, engineering valuer, auctioneer, and agent, Albert-street, St. Mary's, Manchester, where the whole of the drawings may be seen.

**TO IRON MANUFACTURERS AND OTHERS.**

**TO BE SOLD, BY PRIVATE CONTRACT,** through the failure

of a public company, for whom they have been manufactured, magnificent new BLAST ENGINE, FURNACES, &c., by those pre-eminent engineers, William Fairbairn and Sons, of Manchester. The bore of the steam cylinder of the engine



**NICHOLLS, WILLIAMS, AND CO.** have generally a GOOD STOCK of SECOND-HAND MINING MATERIALS FOR SALE, including ironwork for a water-wheel, 40 ft. diameter, 2½ ft. breast. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

**PATENT LEVER BREAK, FOR RAILWAY WAGONS.**—Doing away with the objectionable break rack. Can be APPLIED TO EXISTING STOCK at a TRIFLING EXPENSE. Royally moderate. Models can be seen at 84, Great George-street, Westminster; and the breaks in action at the works of the Railway Carriage Company; at the Peterboro' Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taff Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent.

**INCORUSTATION OF STEAM BOILERS.**—EASTON'S PATENT BOILER FLUID EFFECTUALLY REMOVES AND PREVENTS INCORUSTATION IN STEAM BOILERS, WITHOUT INJURY TO THE METAL, with GREAT SAVING IN FUEL, and with LESS LIABILITY TO ACCIDENT FROM EXPLOSION. It is used by Her Majesty's Steam Storehouse, Woolwich Arsenal, Honourable Corporation of Trinity House, Tower of London, India Store Department, by the principal Steam Packet Companies of London, Liverpool, Southampton, Hull, &c., and by engineers, builders, railway companies, and manufacturers throughout the country. Testimonials from eminent engineers, boiler makers, and manufacturers, with full particulars will be forwarded on application to P. S. EASTON and G. SPRINGFIELD, sole manufacturers and patentees, Nos. 37, 38, and 39, Wapping-wall, London, E.

**AGENTS IN GREAT BRITAIN.**  
Aberdeen, Mr. James F. Wood.  
Aston-under-Lyne, Mr. G. Fielden.  
Belfast, Mr. W. T. Matter, C.E.  
Birmingham, Mr. Adam Dixon.  
Chester, Mr. W. A. Rowland.  
Devonport, Mr. Cornelius Boulds.  
Dublin, Mr. Wm. Pith.  
Edinburgh, Mr. W. B. Harvey, Chemist.  
Exeter, Mr. W. Multrie.  
Hartlepool, Mr. W. T. Cheesman, West Hartlepool.  
Hull, Messrs. A. L. Fleming and Co.  
Leeds, Mr. J. C. P. Westwood.  
Lancaster, Mr. Benjamin Pochin.  
Liverpool, Mr. J. McInnes.  
Manchester, Messrs. Morris and Sutton, Princess Chambers.  
Nottingham, Mr. G. D. Hughes.  
Oldbury, Mr. C. Tonge, Chemist.  
Southampton, Mr. Joseph Clark.  
Southsea, Mr. T. Cheesman.  
Tralee, Mr. H. Benner.  
Wexford, Mr. Thomas Waring.

**FOREIGN.**  
Rio de Janeiro, Messrs. Miers Brothers and Maylor, Engineers.  
Odessa and South Russia, Mr. W. Baxter, Engineer, Nicolaieff.

**BASTIER'S PATENT CHAIN PUMP.**—APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

- 1.—It utilizes from 90 to 92 per cent. of the motive power.
- 2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
- 3.—It occupies a very small space.
- 4.—It raises water from any depth with the same facility and economy.
- 5.—It raises with the water, and without the slightest injury to the apparatus sand, mud, wood, stone, and every object of a smaller diameter than its tube.
- 6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheel Concorde Mine, South Sydneyham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT HIS PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors and others, for the USE of his INVENTION.

OFFICES, 19, MANCHESTER BUILDINGS, WESTMINSTER, LONDON, E.C.  
London, Oct. 10, 1859. Hours, from Ten till Four. J. U. BASTIER, C.E.

**AUSTRALIA AND NEW ZEALAND**  
WHITE STAR EX-ROYAL MAIL CLIPPERS,

LIVERPOOL TO MELBOURNE on the 1st and 30th of every month.

\* Passengers holding Victoria passage warrants will be forwarded to Melbourne by these vessels.

Ship. For. Register. Burthen. To sail.  
COMMODORE PERRY .. Melbourne & Auckland 2016 .. 6000 .. Aug. 20.  
BLUE JACKET .. Melbourne .. 1559 .. 4750 .. Sept. 20.  
LORD RAGLAN .. Melbourne .. 1900 .. 5500 .. Oct. 20.

The celebrated clipper, *Commodore Perry*, will be dispatched for Melbourne and Auckland, in New Zealand, as above. She is one of the fastest clipper ships afloat, and her accommodations for all classes of passengers are superb.

For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GRINDLAY and Co., 124, Bishopgate-street, and 55, Parliament-street; or to SKYMOOR, FRASER, and Co., 116, Fenchurch-street, London.

Willcox's Australian and New Zealand hand-books sent for two stamps.

**TO BRASSFOUNDERS, ENGINEERS, REFINERS, &c.**—

The PATENT PLUMBAGO CRUCIBLE COMPANY beg to CALL the ATTENTION of all users and shippers of melting pots to the GREAT SUPERIORITY of the PATENT CRUCIBLES, which have been used during the last three years by some of the largest melters in England and abroad. In addition to their capabilities of melting an average of from 85 to 40 pounds, they are unaffected by change of temperature, never crack, but can be used till worn out, requiring only one annealing for several days' work, and become heated much more rapidly than ordinary pots, EFFECTING thereby a SAVING of more than FIFTY PER CENT. in time, labour, fuel, and waste. The Patent Plumbago Crucible Company also manufacture and import clay crucibles, muffle, portable furnaces, sublimate pans and covers, glass pots, all descriptions of fire-standing goods, and every requisite for the assayer and dentist.

Also, sole proprietors of fine POWDERED PURE FLOUR PLUMBAGO, which they can confidently recommend for anti-friction purposes, being an impalpable powder, and warranted perfectly free from grit and any impurity. For ordinary polishing purposes it will be found superior to any of the black leeds offered. Price, £27 10s. per ton; 30s. per cwt. Samples of 28 lbs. forwarded on receipt of 8s. Packages free.

For Lists, Testimonials, &c., apply to the BATTERSEA WORKS, London, S.W.

**INVESTMENTS IN BRITISH MINES.**—

Mr. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING, giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, and DENDERS PAID, &c.; price One Shilling. REFERENCE TO INFORMATION and ADVICE will at once be given by Mr. MURCHISON, either personally or by letter, at his Office, No. 117, BISHOPSGATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

**OPINIONS OF THE PRESS ON MR. MURCHISON'S WORK ON BRITISH MINING,**  
PUBLISHED IN 1856.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments. —*Mining Journal*.

The book will be found extremely valuable. —*Observer*.

A valuable guide to investors. —*Herapath*.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines. —*Morning Herald*.

A valuable little book. —*Globe*.

Of special interest to persons having capital employed, or who may be desirous of investing in mines. —*Morning Chronicle*.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains information more than any other on the subject of which it treats. —*Daily Telegraph*.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison. —*Leeds Times*.

To those who wish to invest capital in British Mines, this work is of the first importance. —*Welshman*.

This is really a practical work for the capitalist. —*Stockport Advertiser*.

This work enables the capitalist to invest on sound principles; in truth, it is an excellent guide. —*Plymouth Journal*.

All who have invested, or intend to invest, in mines, would do well to consult this very useful work. —*Spetch Express*.

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide. —*Warwick Advertiser*.

We believe a more useful publication, or one more to be depended on, cannot be found. —*Plymouth Herald*.

Those interested in mining affairs, or who are desirous of becoming speculators should read and carefully peruse the work. —*Monmouth Beacon*.

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital. —*Poole Herald*.

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book. —*North Wales Chronicle*.

**THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER.** (ESTABLISHED 1764).

Published every Saturday, price 2d., or quarterly 2s. 2d.

**THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.**

Published every morning, price 1d.

The best medium for mining, manufacturing, shipping, and trading advertisements in the North of England.

Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

**A BOON TO NERVOUS SUFFERERS.**

gratuitous circulation. HENRY SMITH, Doctor of Medicine of the Royal University of Jena, &c., who has devoted 15 years to the study and Treatment of Nervous Debility, Loss of Memory, and Indigestion, will send free, for the benefit of Nervous Sufferers, a copy of the NEW MEDICAL GUIDE, containing his highly successful mode of treatment, with necessary instructions by which sufferers may obtain a cure. Post free on receipt of a stamped directed envelope, from the author's residence, 5, Barton-crescent, Tavistock-square, London, W.C.


**RAILWAY WAGONS.**—WILLIAM A. ADAMS AND CO. MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS, IN STOCK—FOR SALE OR HIRE.

**THE RAILWAY CARRIAGE COMPANY,** OLDBURY, NEAR BIRMINGHAM. MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.

NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE. LONDON OFFICES.—No. 1, MOORGATE.

**THE BIRMINGHAM WAGON COMPANY (LIMITED)** HAS RAILWAY WAGONS FOR HIRE. Apply to the SECRETARY, 3, Newhall-street, Birmingham.

**JAMES RUSSELL AND SONS, CROWN TUBE WORKS,** WEDNESBURY, STAFFORDSHIRE.

WAREHOUSE.—81, UPPER GROUND STREET, BLACKFRIARS, LONDON, S. The Original Inventors and First Manufacturers of the Patent Wrought-iron Tubes for Gas, Steam, Water, &c. Enamelled Tubing, and Glazed Ditto. Russell and Howell's Homogeneous Tubes. And agents for G. F. Muntz's Solid Brass Tubes. Every variety of fittings. Trade mark, 


**LYOYD AND LLOYD, ALBION TUBE WORKS,** BIRMINGHAM.

MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS. IMPROVED HOMOGENEOUS METAL TUBES. ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANISED AND ENAMELLED. GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c.

**SHORTIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD,** SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, AND TUBES, COMBINING THE STRENGTH OF STEEL WITH THE MALLEABILITY OF COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTIDGE, HOWELL, AND CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY AND CO., 12, Haymarket, London.

**FARRAR'S PATENT STEEL COMPANY,** WARDSEND STEEL WORKS, SHEFFIELD, MANUFACTURERS OF BEST CAST STEEL, MALLEABLE AND MILD STEEL CASTINGS, SUPERIOR CAST-STEEL FILES, &c. CALL THE ATTENTION OF ENGINEERS AND USERS OF FIRST-CLASS STEEL TO THE GREAT SUPERIORITY OF STEEL MANUFACTURED UNDER THIS PATENT. Prices:—

First quality ..... £50 per ton.  
Second quality ..... 40 "  
Third quality ..... 30 "

Manufactured by  **Wardsend Steel Works, SHEFFIELD.** LONDON OFFICE, 21, BOW LANE, CANNON STREET, WEST, E.C. Where all communications are to be addressed.

**CORNISH BORER STEEL.**—Upwards of ONE HUNDRED AND SIXTY MINES ARE SUPPLIED WITH THIS STEEL, AND THE DEMAND FOR IT IS RAPIDLY INCREASING.—For terms, apply to R. MURPHY and Co., Forest Steel Works, near Coleford, Gloucestershire.

London Agent:—Mr. W. T. HENDRY, 71, Cannon-street West, E.C.

**TO COAL OWNERS AND COKE BURNERS.**

**MACKWORTH'S PATENT COAL WASHER** OR PURIFIER.—THIS MACHINE WILL EXTRACT THE SHALE AND ALL HEAVY IMPURITIES FROM SMALL COAL AT A COST OF TWO PENCE PER TON.—For particulars and references, apply to the makers, A. and T. FAY, Temple-gate Works, Bristol; or to Mr. Jos. RIDEN, Basinghall-street, Leeds.

**WIRE-ROPE TESTING.**

**A. J. HUTCHINGS AND CO.'S PATENT** WIRE-ROPE AT LIVERPOOL, FEBRUARY 27, 1861.

[From the Daily Post of March 1, 1861.]

On Wednesday, the 27th of February, a series of EXPERIMENTS ON WIRE-ROPE took place at the Corporation Testing Works, King's Dock. The specimens tested were manufactured by the well-known firm of A. J. HUTCHINGS AND CO., of Millwall, London, the Contractors to the Lords of the Admiralty and various foreign Governments, the character of whose rope is so well known in this country, as well as all parts of the Continent.

Capt. Ducart, of H.M.S. *Hastings*, and a number of other gentlemen connected with shipping, were present to witness the experiments, all of which were considered highly satisfactory, and in every respect sustained the reputation of the manufacturers. The following are the results of the experiments:—

An 8 in. rope bore 70 tons WITHOUT BREAKING.

Circumference and breaking strain.

10½ tons 14 tons 20 tons 24 tons 29 tons 32½ tons 45½ tons

N.B.—The 2½, 3, and 4 in. ropes were the sizes actually tested. The remaining sizes and strains are comparative.

**THE ABOVE ROPES ARE FOR COLLIERY USE.**

Size. Hutchings and Co.'s wire-rope for ships' rigging. Tested Feb. 27, 1861.

Newall and Co.'s Test of Oct. 29, 1860.

Garnock, Bibby, and Co.'s Test, Oct. 29, 1860.

2 5 tons 15 cwt.

2½ 11 " 14 "

3 16 " 10 "

3½ 22 " 8 "

4 29 " 10 "

4½ 37 " 15 "

N.B.—The 2, 3½, and 4 in. ropes were the actual sizes tested. The remaining sizes and strains are comparative.

The above tests certified by Mr. McDonald the Superintendent of the Corporation Testing Works, Liverpool.

**GARNOCK, BIBBY, AND CO.,** MANUFACTURERS OF HEMP AND MANILLA CORDAGE, AND IMPROVED PATENT NON-TWISTED WIRE-ROPE, CHAPEL STREET, LIVERPOOL.

G. B. and Co. beg to intimate that they use nothing but Bradley's long-drawn charcoal wire in the manufacture of pit and incline rope. The quality of this article is well-known, and its superiority was fully proved at a PUBLIC TEST OF WIRE ROPE, instituted by Messrs. R. S. Newall and Co., at Liverpool, on October 29th, 1860, on which occasion G. B. and Co.'s samples averaged 13 per cent. over their trade card, and were the strongest of all the samples from various manufacturers then tested. —*Mining Journal*, Oct. 29, 1860.

**HEMP AND WIRE-ROPES.**

**JOHN STEPHENS AND SON, HEMP AND WIRE-ROPE** WORKS, ASHFIELD, FALMOUTH, CORNWALL.

MANUFACTURERS OF FLAT AND ROUND HEMP AND WIRE-ROPES, GUIDE ROPES FOR SHIFTS, GALVANISED WIRE SIGNAL LINE AND STRAND FENCING, &c., for MINES, RAILWAYS, &c.

A first-class medal was awarded to JOHN STEPHENS AND SON for their manufactures, by the Royal Cornwall Polytechnic Society, in 1860.

**PATENT SAFETY FUSE.**—THE GREAT EXHIBITION PRIZE MEDAL WAS AWARDED TO THE MANUFACTURERS OF THE ORIGINAL SAFETY FUSE, BICKFORD, SMITH DAVEY, and PRYOR who beg to Inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is superior to Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall.

**SAFETY FUSE.**—Messrs. WILLIAM BRUNTON AND CO., PENHALICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

**MESSRS. W. BRUNTON AND CO.** have great pleasure in informing their customers and friends, and the mining community, that they have RESUMED MANUFACTURING, at their PENHALICK WORKS, POOL, near CAMBORNE, and are PREPARED as before to SUPPLY SAFETY FUSE of a QUALITY which CANNOT BE SURPASSED.

BRANCH WORKS, BRYMBO, NEAR WREXHAM.

**DAVEY'S PATENT BLASTING POWDER,** MANUFACTURED BY DAVEY BROTHERS AND CO., NANCEKOU POWDER WORKS, TUCKINGMILL, CORNWALL.

This blasting powder possesses the following advantages over every other in use:—

ITS COMBUSTION IS SLOWER AND MORE PERFECT when confined in a hole, PRODUCES LESS SMOKE, IS LESS DANGEROUS, and it generally BURSTS MORE ROCK with a CHARGE OCCUPYING THE SAME SPACE, BUT WEIGHING AN IMPORTANT SAVING.

DAVEY BROTHERS AND Co. beg to state that this powder is specially made for blasting, and from its slow combustion is not adapted for projectiles. They would, therefore, caution consumers against the efforts of interested parties to put it to a fallacious trial, by firing a ball from a mortar, which is no test of its explosive force when confined.

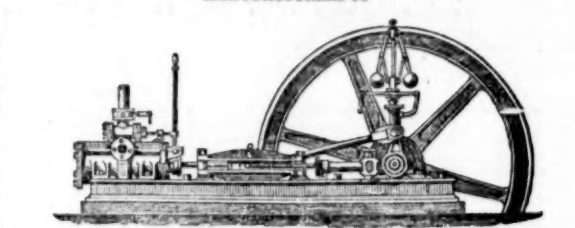
**ASSAY OFFICE AND LABORATORIES,** DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT, LONDON.

Conducted by MITCHELL and RICHARD (late John Mitchell, F.C.S., Author of *Manual of Practical Assaying*, Metallurgical Papers, &c.)

Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c.

For amount of fees, apply to the office, as above.

**MESSRS. E. PAGE AND CO.,** VICTORIA WORKS, REDFORD, AND LAURENCE POUNTNEY PLACE, CANNON STREET, LONDON MANUFACTURERS OF



**HIGH PRESSURE STEAM ENGINES,** from 2½ to 30 horse power, and upwards, adapted for MILLS, AGRICULTURAL, MINING, and GENERAL PURPOSES. The following sizes are ready for immediate delivery, and may be seen at any time at their London depot:—  
ONE 5 in. cylinder, 10 in. stroke. ONE 12 in. cylinder, 36 in. stroke.  
TWO 8 in. cylinder, 18 in. stroke. ONE 14 in. cylinder, 36 in. stroke.  
ONE 10 in. cylinder, 18 in. stroke. ONE 17 in. cylinder, 36 in. stroke.  
ONE 14 in. cylinder, 24 in. stroke. TWO 20 in. cylinder, 36 in. stroke.  
Prices and full particulars sent on application.

**MESSRS. KNOWLES AND BUXTON, CHESTERFIELD,** MANUFACTURERS OF PATENT TUBULAR TUYERES.



Having been very successful in MANUFACTURING and REPAIRING the PATENT TUBULAR TUYERES, and securing our patent for a further term of years, we have great pleasure in offering them to the public, at a considerable REDUCTION IN PRICE. Our manner of repairing will make them as LARGE and GOOD AS WHEN NEW (which is not the case with the ordinary tuyere) for half the first cost, when there is not more than two coils destroyed at the nozzle, all parties returning their carriage paid, and are confident they will be the cheapest and best ever offered to the mining world. The PATENT TUBULAR TUYERES having maintained a most honourable reputation since their introduction, and been thoroughly proved to answer all the purposes set forth by the proprietors (when properly treated), it is, therefore, deemed unnecessary to publish a list of the patrons, or enumerate cases of their success. Although by such a procedure very much might be said in their favour, yet the readers would never be so fully convinced of their sterling worth as by a practical trial.

The future scale of prices will be as follows, including sockets:—

No. 1 Tuyere, 16 in. long ..... 28s. each.  
No. 2 " 18 " ..... 32s. "  
No. 3 " 20 " ..... 36s. "  
No. 4 " 22 " ..... 40s. "  
No. 5 " 24 " ..... 44s. "  
Delivered at Chesterfield station. Terms, nett cash quarterly.

**CLAYTON, SHUTTLEWORTH, AND CO.,** AGRICULTURAL AND GENERAL ENGINEERS, LINCOLN, and 78, LOMBARD STREET, LONDON.

**MANUFACTURERS OF PORTABLE AND FIXED STEAM ENGINES,**

Which are adapted for every purpose to which steam-power can be applied. When intended for winding they are fitted with reversing link motion and requisite gearing. The portable engines are easy of removal from place to place, and may be set to work immediately on arrival.

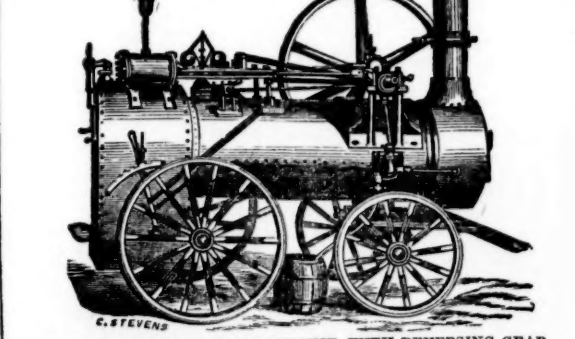
**COMBINED THRASHING MACHINES,** Which dress the corn ready for market at one operation.

**GRINDING AND MORTAR MILLS, SAWING MACHINERY, PUMPS FOR IRRIGATION and MINING PURPOSES.**

Full particulars and estimates supplied on application to CLAYTON, SHUTTLEWORTH, and Co., as above.

**PORTABLE STEAM ENGINE COMPANY (LIMITED).** CITY OFFICE, 5, ADAM'S COURT, OLD BROAD STREET. DEPOT.—92, BLACKFRIARS ROAD.

**PATENT PORTABLE STEAM ENGINE, WITH REVERSING GEAR.** PORTABLE STEAM ENGINES LENT ON HIRE, from 4 to 25 horse power. Every information can be obtained on application to Mr. DUNFORD, at the City office; or to Mr. CRESSWELL, the company's engineer, at the depot.



**HALEY'S PATENT LIFTING JACK,** MANUFACTURED BY THE INVENTOR, JOSEPH HALEY, ALBION STREET, GAYTHORN, MANCHESTER.

**SCREW JACKS, SHIP JACKS.**

**SLIDE AND CENTRE LATHES, PLANING, SHAPING, BORING, DRILLING, SCREWING, WHEEL CUTTING, AND OTHER MACHINES.**

**RIVET MAKING MACHINES.**

**DR. MARSTON'S LECTURES—FREE ISSUE.**—The following LECTURES ARE ISSUED GRATUITOUSLY by the Professors of the ROYAL INSTITUTE OF ANATOMY AND SCIENCE, 369, OXFORD STREET, LONDON, firstly as a mark of sincere esteem to their distinguished colleague, Dr. MARSTON, M.R.C.S., L.S.A., and secondly from a conscientious belief that the lectures will do a vast amount of good, by enlightening the public upon subjects of the highest importance to their moral welfare and physical health, ignorance of which has to the present day been a most fruitful cause of human suffering and misery.

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These lectures contain Dr. Marston's experience during 25 years of successful practice, and point out to those who need it simple yet effective means of complete restoration to vigorous health. —*Medical Journal*.

State the number of the lecture required, and enclose two stamps to prepay postage; or the whole four may be had, neatly bound, 164 pages octavo, post free for six stamps.

—Address, Treasurer, Royal Institute, 369, Oxford-street, London.



## THE MINING SHARE LIST.

## DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Call.
4000	Bedford United (copper), Tavistock.	2 6 8.	5	4 1/2	12 7 0.	3 6—June, 1861
240	Boscan (tin), St. Just.	20 10 0.	50	—	33 0 0.	1 10—May, 1861
200	Botalack (tin, copper), St. Just.	91 5 0.	190	230 240	443 5 0.	2 10—Feb. 1861
1000	Carn Brea (copper, tin), Illogan.	15 0 0.	70	65 67 1/2	269 10 0.	2 0—Feb. 1861
2048	Carnyorth (tin), St. Just.	3 10 0.	13 1/2	—	0 13 0.	2 0—Sept. 1860
200	Cefn Cwm Brynno (lead), Cardiganshire.	33 0 0.	33	—	9 0 0.	4 0—April, 1861
50000	Concorree (copper, sulphur), Llan.	1 0 0.	34 1/2	34 1/2	0 9 0.	0 9—July, 1860
2450	Cook's Kitchen (copper), Illogan.	17 0 0.	28	26 28	0 8 0.	0 8—May, 1861
12000	Copper Mines of England.	25 0 0.	25	—	7 1/2 per cent.	Half-yearly.
350000	Ditto (stock)	100 0 0.	24	—	1 per cent.	Half-yearly.
1055	Graddock Moor (copper), St. Cleer.	8 0 0.	26	—	5 13 0.	0 5—July, 1861
667	Cwm Erddin (lead), Cardiganshire.	7 10 0.	16 1/2	—	5 8 0.	1 0—July, 1861
128	Cwmystwith (lead), Cardiganshire.	60 0 0.	240	—	227 10 0.	5 0—May, 1861
200	Derwent Mines (all-lead), Durham.	300 0 0.	180	—	142 0 0.	5 0—June, 1861
1024	Devon Gt. Con. (cop.), Tavistock [S.E.]	1 0 0.	355	—	760 0 0.	7 0—July, 1861
358	Dolcoath (copper, tin), Camborne.	128 17 0.	510	—	626 10 0.	8 0—June, 1861
512	East Basset (cop.), Redruth [S.E.]	29 10 0.	87 1/2	75 77 1/2 x d.	87 0 0.	5 0—July, 1861
6144	East Caradon (copper), St. Cleer [S.E.]	2 14 6.	24 1/2	23 1/2	0 17 0.	0 10—July, 1861
300	East Darren (lead), Cardiganshire.	32 0 0.	67	—	75 10 0.	1 0—April, 1861
2000	East Wheel Lovell (tin), Wendron.	2 10 0.	—	—	0 5 0.	0 5—July, 1859
1400	Eyan Mining Co. (lead), Derbyshire.	5 0 0.	—	—	20 3 4.	0 10—May, 1861
4940	Fowey Consols (copper), Twardreath.	4 0 0.	5	—	41 2 3.	0 2—June, 1860
9500	Foxdale, Isle of Man, Limited (lead)	25 0 0.	35	—	61 8 3.	0 1—Dec. 1860
5000	Frank Mills (lead), Devon.	3 18 6.	4 1/2	—	0 11 0.	0 3—July, 1861
6000	Great South Tois (S.E.), Redruth.	0 14 6.	3 1/2	2 1/2	7 13 6.	0 5—Feb. 1861
1798	Great Wheel Fortune, Breage.	18 0 0.	11	10 1/2	1 0 0.	0 10—July, 1861
5000	Great Wh. Vor (tin, cop.), Helston [S.E.]	40 0 0.	6	—	0 5 0.	0 5—May, 1861
1024	Herodfoot (id.), near Liskeard [S.E.]	8 10 0.	37	36 38	14 10 0.	2 0—June, 1861
1000	Hibernian Mine Company.	32 0 0.	95	—	0 15 0.	0 15—Feb. 1861
1200	Levant (copper, tin), St. Just.	2 0 0.	95	—	1091 0 0.	3 0—June, 1861
400	Llabenne (lead), Cardiganshire, Wales.	18 15 0.	125	—	373 10 0.	3 0—June, 1861
9000	Marke Valley (copper), Cardon.	4 10 6.	8 1/2	9 9 1/2	1 1 0.	0 5—July, 1861
5000	Mendip Hills (lead), [L.], Somerset.	3 15 0.	13 1/2	—	2 1 0.	0 2—May, 1860
1800	Minera Mining Co. [L.], (id.), Wrexham.	25 0 0.	180	—	71 9 4.	4 5—May, 1861
400	Mount Pleasant, Mold.	4 0 0.	25	—	14 7 11.	0 7—June, 1861
600	New Birch Tor and Viller Consols.	1 6 6.	2	1 1/2	0 2 6.	0 2—May, 1861
1368	North Gambler, Redruth.	2 7 6.	6 1/2	6 1/2	0 10 0.	0 10—May, 1861
6000	North Great Corn, Breage.	0 3 1/2	4 1/2	—	2 0 0.	0 2—May, 1860
5000	Orsed (lead), Flintshire.	0 3 1/2	4 1/2	—	0 4 0.	0 9—May, 1861
6100	Par Consols (cop.), St. Blazey [S.E.]	1 2 6.	9 1/2	8 1/2	36 4 0.	0 5—July, 1861
200	Parys Mines (copper), Anglesey [L.]	60 0 0.	—	—	5 0 0.	5 0—Jan. 1860
200	Phenix (copper, tin), Llanthorne.	100 0 0.	435	—	449 10 0.	55 0—May, 1861
1772	Polberron (tin), St. Agnes.	—	—	—	6 9 6.	0 15—April, 1861
1120	Providence (tin), Uny Lelant [S.E.]	10 6 7.	36	33 35	89 15 0.	1 0—May, 1861
16	Rosemar.	60 0 0.	—	—	1260 0 0.	100 0—0
812	South Caradon (cop.), St. Cleer [S.E.]	1 5 0.	305	300 310	346 0 0.	5 0—May, 1861
512	South Tois (copper), Redruth, Cornwall.	8 0 0.	40	—	103 10 0.	1 0—July, 1861
2000	South Wheel Fortune, Breage.	18 9 0.	120	115 120	355 5 0.	1 0—July, 1861
1800	Spearhead Mine (tin, cop.), St. Just.	31 17 9.	45	—	5 15 0.	0 15—June, 1861
910	St. Ives Consols (tin), St. Ives.	4 10 0.	13 1/2	13 1/2	484 0 0.	0 15—June, 1861
4000	Tamar Con. (all-ld.), Beccles [S.E.]	4 10 0.	13 1/2	13 1/2	10 8 6.	0 3—Feb. 1861
6000	Tolcove (cop., tin), Fowl, Illogan [S.E.]	9 0 0.	5 1/2	5 1/2	0 13 6.	0 3—May, 1860
6000	Tinvalden (copper), Marazion.	—	—	—	0 13 6.	0 3—May, 1860
472	Trelyon Consols (tin), St. Ives.	11 10 0.	12 1/2	—	7 0 0.	0 10—Sept. 1860
200	Trumpet Consols (tin), near Helston.	57 10 0.	100	—	52 0 0.	2 0—May, 1861
1024	Wendron Consols (tin), Wendron.	11 13 10.	16	—	8 15 0.	1 0—Jan. 1861
6000	West Basset (copper), Illogan [S.E.]	1 10 0.	18	14 16	21 15 0.	0 5—July, 1861
60	West Burton Gill (lead), Yorkshire.	60 0 0.	—	—	14 10 0.	3 0—June, 1861
1024	West Caradon (S.E.), Liskeard [S.E.]	5 0 0.	44	40 42	36 1 3.	1 10—July, 1861
258	West Damsel (copper), Gwennap.	37 0 0.	—	—	5 15 0.	0 5—June, 1861
4400	West Fowey Consols (tin and copper).	7 10 0.	5	—	0 14 0.	0 2—May, 1861
400	W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0.	310	290 300	308 0 0.	0 10—June, 1861
512	Wheel Basset (copper), Illogan [S.E.]	5 2 6.	92	87 1/2 90	570 10 0.	2 0—June, 1861
256	Wheel Buller (cop.), Redruth [S.E.]	5 0 0.	105	—	929 0 0.	2 0—May, 1861
400	Wheel Clifford (cop.), Gwennap [S.E.]	—	160	145 155	89 10 0.	5 0—April, 1861
2000	Wheel Falmouth and Sperris.	2 5 0.	8	—	0 10 0.	0 10—Feb. 1861
128	Wheel Friendship (copper), Devon.	60 0 0.	90	—	2400 10 0.	5 0—Feb. 1860
512	Wheel Jane (silver-lead), Kea.	3 10 0.	18	—	10 10 0.	1 0—Feb. 1860
1024	Wheel Lelant (tin), Uny Lelant [S.E.]	2 10 0.	11	—	8 0 0.	0 10—Sept. 1860
800	Wheel Lelant (tin), St. Ives.	2 10 0.	2 1/2	2 1/2	1 8 0.	0 4—Oct. 1861
800	Wh. Margaret (tin), Uny Lel. [S.E.]	9 17 4.	40	41 43	68 0 0.	1 10—May, 1861
100	Wheel Mary (tin), Lelant.	36 2 6.	440	—	280 5 0.	7 0—June, 1860
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0.	10	—	37 17 6.	0 10—June, 1861
80	Wheel Owles, St. Just, Cornwall.	70 0 0.	300	—	275 13 0.	5 0—May, 1861
8000	Wicklow (copper) [L.], Wicklow.	5 0 0.	58	—	41 17 6.	2 12—Mar. 1861

[\* Dividends paid every two months. † Dividends paid every three months.]

## MINES WITH DIVIDENDS IN ABEYANCE.

700	Aberdovey (silver-lead), Merioneth.	1 10 0.	30	—	0 10 0.	0 10—Mar. 1859
5120	Alfred Consols (cop.), Phillack [S.E.]	2 17 1/2.	13 1/2	13 1/2	20 3 0.	0 2—April, 1859
1200	Brightside & Froggatt Grove, Derbyshire.	11 5 0.	12	—	12 5 0.	0 6—Jan. 1861
1500	Central Miners (lead) [L. £5]	0 15 0.	3 1/2	—	0 3 0.	0 3—April, 1861
6000	Charlotte United, Penryn.	2 3 2.	7 1/2	7 1/2	0 13 0.	1 6—Dec. 1859
2000	Chollcombe (copper), Lamerton.	5 5 0.	12	—	3 5 0.	0 8—Dec. 1859
256	Condurow (cop., tin), Camborne.	20 0 0.	45	52 1/2 57 1/2	85 0 0.	2 0—June, 1859
256	Copper Hill (copper) Redruth.	48 4 0.	100	—	2 10 0.	2 10—Sept. 1859
4076	Devon and Cornwall (copper).	4 16 3.	6	—	0 10 0.	0 2—Feb. 1859
672	Ding Dong (tin), Guilva.	39 2 6.	19	—	16 7 6.	1 10—Mar. 1859
12500	Drake Walls (tin, copper), Calstock.	2 1 0.	3 1/2	3 1/2	0 13 6.	0 2—Sept. 1859
3048	East Falmouth (all-ld.), Kenwyn, Kea.	2 15 0.	—	—	0 7 6.	0 2—Jan. 1858
128	East Pool (tin, copper), Liskeard.	24 5 0.	400	—	308 0 0.	2 10—Aug. 1858
6000	General Mining Co. for Irel. (cop. id.)	4 10 0.	11	—	23 0 0.	1 0—July, 1859
486	Gambler and St. Aubyn (cop.) [S.E.]	47 10 0.	11	—	23 0 0.	1 0—July, 1859
119	Great Work (tin), Gernoe.	100 0 0.	110	—	221 10 0.	7 10—Feb. 1859
200	Herward United (lead), Flintshire.	40 0 0.	10	—	3 0 0.	1 10—July, 1860
6000	Hington Down Con. (cop.), Cals. [S.E.]	4 16 2.	2	1 1/2 1 1/2	2 16 0.	0 2—Nov. 1856
5000	Kelly Bray (lead, copper), Callington.	4 3 6.	1 1/2	—	0 6 0.	0 2—Feb. 1856
20	Laxey Mining Company, Isle of Man.	100 0 0.	1200	—	1420 0 0.	0 5—June, 1857
470	Newtownards Mining Co., Co. Down.	60 0 0.	35	—	56 0 0.	1 0—Sept. 1857
700	North Colcoath (copper), Camborne.	2 2 6.	3 1/2	—	0 5 0.	0 2—June, 1859
1000	North Keskear (copper), Camborne.	16 0 0.	21	17 1/2 20	167 0 0.	4 0—Sept. 1859
1024	Rosewarne and Herland United.	1 4 0.	3	—	2 10 0.	0 10—Oct. 1859
512	Rosewarne United (cop., tin), Gwinnar.	18 0 0.	24	—	0 10 0.	0 2—June, 1860
12000	Sordridge Con. (cop.), Whitechurch [S.E.]	0 16 1/4.	14 1/2	12 1/4 14 1/2	0 10 0.	0 2—June, 1859
128	South Crinins (copper), St. Austell.	19 0 0.	285	—	60 0 0.	0 20—June, 1855
20000	St. Day United (tin and cop.), Redruth.	2 7 0.	3 1/2	—	0 3 6.	0 10—Feb. 1855
400	United Mines (copper), Gwennap.	55 0 0.	32 1/2	—	80 5 0.	2 10—April, 1858
20000	Value of Towry (lead), Carmarthen [S.E.]	0 13 6.	6 1/2	—	0 5 0.	0 10—July, 1858
1024	West Providence (tin), St. Erth.	15 15 0.	34 1/2	—	23 1 0.	0 10—April, 1857
400	Wheel Bal (tin), St. Just.	15 0 0.	16	—	4 0 0.	1 0—Feb. 1859
1024	Wheel Gwylfa (tin), Calstock [S.E.]	7 7 6.	2 1/2	2 1/2	8 5 0.	0 5—Mar. 1858
1024	Wheel Killy (tin), St. Agnes.	4 12 3.	7	—	1 12 0.	0 7—June, 1858
348	Wheel Lovell (tin), Wendron.	33 0 0.	7	—	31 0 0.	1 0—Sept. 1856
1024	Wheel Margery (tin, copper).	15 13 0.	4 1/2	—	0 10 0.	0 10—May, 1860
396	Wheel Seton (tin, copper), Camborne.	68 10 0.	65	—	131 15 0.	1 10—Dec. 1859
1040	Wh. Trevelyan (all-ld.), Liskeard [S.E.]	5 17 0.	14 1/2	13 14	48 15 0.	1 0—Oct. 1860
1024	Wheel Tremeay (tin, cop.), Gwinnar.	12 12 6.	3	—	10 2 6.	0 7—Jan. 1854
4000	Wheel Wrey Consols (lead), St. Ives.	3 9 0.	5	—	2 12 6.	0 2—Dec. 1857

## FOREIGN MINES.

2464	Burra Burra (cop.), South Australia.	5 0 0.	132	—	265 0 0.	5 0—June, 1861
10000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0.	35 37	—	97 12 0.	1 0—July, 1861
10000	Copiapu Mining Company, Chile [L. £1]	16 0 0.	8	—	6 8 0.	0 5—Jan. 1861
15000	East Indian Coal, Calcutta [L.]	10 0 0.	10	—	7 1/2 per cent.	Yearly.
70000	English and Australian [S.E.]	5 0 0.	3 1/2	—	1 2 6.	0 5—Feb. 1861
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	30 0 0.	24	22 24	18 5 0.	1 0—June, 1861
60000	Kapunda Mining Co., Australia [S.E.]	1 0 0.	2 1/2	2 1/2	0 8 0.	0 2—June, 1861
15000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0.	8	6 1/2 7 1/2	8 6 2.	0 3—July, 1861
10000	Lusitania (of Portugal) [S.E.]	2 0 0.	2	—	0 8 0.	0 1—Aug. 1861
100000	Marquiza and New Granada [S.E.]	1 0 0.	1 1/2	1 1/2	0 9 6.	0 1—July, 1859
10000	Port Phillip (gold), Clunes [S.E.]	1 0 0.	1	—	4 0 0.	1 0—July, 1861
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0.	34	34 35	43 0 0.	2 10—June, 1861
20000	West Canada Mining Company [L.]	1 0 0.	1 1/2	—	0 2 0.	0 2—June, 1860

## FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Quanganen Uni. (cop.) [L. £5]	4 10 0.	3	—	4 5 0.	0 15—Nov. 1853
10000	St. Barreier Land, Min. & N. Ze. [L. £5]	4 5 0.	3 1/2	—	15 per cent.	May, 1859
10000	Pontigbau (all-lead), France [S.E.]	20 0 0.	4	—	1 0 0.	1 0—June, 1855
43174	Unit. Mexican (all.), Mexico [S.E.]	28 5 0.	4 1/2	4 1/2	1 16 6.	0 4—Feb. 1853

## NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Div. done.	Last Cal.
20000	Australian (copper), South Australia [S.E.]	7 7 6.	1	1 1/4	Sept. 1858
75000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	0 17 6.	13 1/2	13 1/2	Dec. 1860
6000	Central American (silver) [L.]	5 0 0.	8 1/2	—	Feb. 1859
17000	Central Italian (copper) [7000 £2 paid]	0 0 0.	—	—	Jan. 1861
60000	Clarendon Consols (copper), Jamaica [S.E.]	0 17 6.	8 1/2	—	Jan. 1861
10000	Copiapu Smelting [L.], Chile	10 0 0.	8 1/2	—	Jan. 1861
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0.	1	3/4 1	Fully paid
30000	East Kongberg Native Silver Mining Co. of Norway [L. £2]	1 0 0.	3 1/2	—	April, 1858
80000	Ellerslie and Bardowie, Jamaica [S.E.]	0 18 0.	1 1/2	—	April, 1858
20000	English and Canadian Mining Company [L.]	5 0 0.	—	—	Fully paid
25000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0.	2 1/2	2 3/4	Fully paid
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	1 0 0.	1 1/2	1 1/2	Fully paid
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0.	—	—	Fully paid
50000	Imperial Thessalian (lead, &c.), Thessaly [L. £2]	0 10 0.	3 1/2	—	June, 1858
30000	Lagunazo (sulphur, copper), Portugal [L. £1]	0 10 0.	3 1/2	—	May, 1861
60000	New Granada (gold), South America [S.E.]	1 0 0.	3 1/2	—	Fully paid
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	1 0 0.	1	—	Nov. 1857
60000	North River Copper of South Australia [L. £1] [S.E.]	0 12 6.	3 1/2	—	June, 1858
15000	Panama Silver Mining Company, Mexico [L. £1]	0 10 0.	1 1/2	—	April, 1861
80000	Scottish Australian Mining Company [L. £1]	0 10 0.	3 1/2	—	Nov. 1857
15000	South Europe Mining Company, Spain [L. £2]	3 0 0.	—	—	May, 1861
50000	St. John's United (copper, lead), Newfoundland [L. £1]	1 0 0.	—	—	Mar. 1861
45000	Victor Emanuel, Italy [L.] [20,000 Prof. Shares, 5000 £1 pd.]	—	—	—	—
1000	Western Africa Malachite (copper) [L.]	13 0 0.	—	—	Oct. 1861
12000	Wheal Ellen, South Australia [L. £2]	4 0 0.	2 1/2	—	July, 1861
35425	Wheal Jamaica (copper)	1 0 0.	18s.	—	Fully paid
80000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0.	3 1/2	3 1/2	Fully paid